Community Power

Model legal frameworks for citizen-owned renewable energy

COMMUNITY POWER

ClientEarth

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Authors
ClientEarth energy Lawyers Josh Roberts, Frances Bodman and Robert Rybski.

Sharon Turner
Senior Law and Policy Advisor,
Climate and Energy Programme
Visiting Professor, University College London and University of Sussex
+44 (0)203 030 5986
sturner@clientearth.org

Josh Roberts
Lawyer (US Qualified),
Climate and Energy Programme
+44 (0)207 749 5975
jroberts@clientearth.org

Frances Bodman
Lawyer,
Climate and Energy Programme
+44 (0)203 030 5962
fbodman@clientearth.org

Robert Rybski
Lawyer,
Climate and Energy Programme
+48 (0)22 307 0181
rrybski@clientearth.org

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[1] Community Power: enabling legislation to increase community ownership for RES projects across Europe (CO-POWER).

Acronyms

A.m.b.A.	Andelsselskaber med begrænset ansvar (Danish Co-operative Limited Company)
AG	Aktiengesellschaft (German Public Company)
ApS	Anpartsselskab (Danish Private Limited Liability Company)
A/S	Aktieselskab (Danish Public Limited Liability Company)
BenCom	Community Benefit Society
CHP	Combined Heat and Power
CIC	Community Interest Company
CIO	Charitable Incorporated Organisation
CJEU	Court of Justice of the European Union
CoM	Covenant of Mayors
DSO	Distribution System Operator
EEG	Erneuerbare-Energien-Gesetz (German Renewable Energy Act)
eG	eingetragene Genossenschaft (German Registered Cooperative Society)
EIA	Environmental Impact Assessment
EIS	Enterprise Investment Scheme
EnWG	Energiewirtschaftsgesetz (German Energy Industry Act)
ESCo	Energy Service Company
FiT	Feed-in Tariff
GmbH & Co. KG	Gesellschaft mit beschränkter Haftung & Compagnie Kommanditgesellschaft (German Limited Partnership with a Private Limited Company as a General Partner)
HNDU	Heat Network Delivery Unit
ICA	International Co-operative Alliance
IEM	Internal Energy Market
IPS	Industrial and Provident Society
I/S	Interessentskab (Danish General Partnership)
KfW	Kreditanstalt für Wiederaufbau
kWh	kilowatt hour
MW/h	Megawatts per hour
NREAP	National Renewable Energy Action Plan
PSO	Public Service Obligation
PV	Photovoltaic
RHI	Renewable Heat Initiative
RO	Renewables Obligation
SEIS	Seed Enterprise Investment Scheme
SEAP	Sustainable Energy Action Plan
TGC	Tradable Green Certificate
TSO	Transmission System Operator

Setting the Scene

Understanding community power in the renewable energy context

As the International Panel on Climate Change (IPCC) has made clear, we urgently need to change how we generate, use and think about energy.[2] Pressures brought on by the need to mitigate climate change, increasing energy demands and energy security concerns require that we move towards a decarbonised and more efficient energy system.

'Community power' – where citizens own or participate in the production and/or use of sustainable energy – is an essential element in Europe's low carbon energy transition. It has been instrumental in triggering the low carbon energy revolutions that are taking place in countries like Denmark and Germany. Along with other community initiatives, it has also contributed to creating public awareness of the need to reduce greenhouse gas (GHG) emissions, the uptake of renewable energy technologies and broader energy efficiency measures across the European Union (EU).[3]

Community power also produces benefits that far outstretch the production of clean sustainable energy. It enables communities to harness local natural resources to build social capital, create employment opportunities in the region, create revenue to address community development needs, and combat fuel poverty. Community ownership and participation in renewable energy projects can also help to generate public support and acceptance for renewable energy projects and reduce local opposition.

The role of the prosumer and energy citizenship more broadly

The low carbon energy transition requires that we design a more cooperative and secure energy system that gets citizens and communities involved in moving towards sustainability. Until now, law and policy across Europe has largely been built to support an energy system based on centralised production using fossil fuels, which regards citizens as passive consumers. By breaking from this mould and realising their potential roles as 'prosumers', and more broadly as 'energy citizens', individuals and communities can become a driving force of the low carbon energy transition. If supported by a fully integrated EU internal energy market (IEM), particularly one that more strongly aligns the EU's energy liberalisation and decarbonisation objectives, local and regional markets for green energy can develop. More socially-oriented enterprises will also be able to enter the market to prioritise and facilitate development of local decentralised smart energy networks. These changes can help ensure that the energy transition results in a truly secure, competitive and sustainable energy system for Europe.

The Prosumer

The idea that citizens are not just consumers, but that they also have potential to be energy producers, particularly of renewable energy. The prosumer can play an active role in the generation of energy, energy storage and demand side management (e.g. through smart meters and equipment to monitor, control and operate energy usage).

Energy Citizenship

The idea that through triggering a wider consciousness among citizens and communities of energy issues, they can contribute more broadly to the energy transition. This encompasses the prosumer and community energy, but it also goes further and includes citizens beginning to participate in owning or operating distribution grids (e.g. through co-operative and/or municipal ownership/management), and in supply (not just producing and exporting electricity to the grid, but also supplying end of the line customers – either through participation in wholesale energy markets or through direct supply) and energy service companies (ESCos). This concept recognises that as a precondition for engaging in these roles citizens need to be provided with the capacity to become knowledgeable participants and to exercise their rights to effectively participate in the political dimension of energy policy.

Hundreds of community energy activists gather to form a 'people's windmill' in front of the European Parliament in Brussels, November 2013

Why we produced this report

This report forms part of a wider 'Community Power Project' aimed at developing EU and national legislation and financing to increase citizen participation in, and ownership of, renewable energy projects across Europe. Public support is essential in order to reach the EU's 2020 renewable energy and GHG reduction targets, and to meeting future climate and energy objectives.

Community power projects across Europe operate in very different legal contexts. In many EU countries, existing legislation does not provide sufficient support for, and in some cases actively impedes, community ownership. By contrast, some countries have specific regulations enabling citizen ownership of, and involvement in renewable energy projects. This report therefore aims to identify examples of best practice in terms of legislation, regulation and policy for community renewable energy projects, and to develop recommendations for policy and legislative change. It is our hope that this report will be used by community groups and decision makers alike to improve enabling legislative conditions at EU and national levels for community energy.

How we approached the report

In order to develop recommendations for model legislation, extensive practical analysis of community power law and policy development was carried out in Spain, Germany, Denmark, and the UK (focusing on the devolved administration in Scotland as a leader in renewable energy development in the UK). These four countries were chosen because of their varying legal systems and considerable success in renewable energy development, some of which is due to support for community power (particularly in Germany and Denmark). Where appropriate for demonstrating best practice, we also used examples from other countries such as Belgium, thanks to the experience and insight of other partners in the Community Power Project.

In-person and phone interviews were carried out with community groups, community energy practitioners, project developers, non-governmental organisations (NGOs), lawyers, local authorities, and others involved in community renewable energy projects. Conferences being held between community power stakeholders were also attended. Furthermore, extensive background research was carried out into specific law and policy in the areas of: legal ownership models; financial

[2] *See* Edenhofer, O *et al* (2014). *Climate Change 2014: Mitigation of Climate Change*, Chapter 7, IPCC WGIII, AR5.
[3] *See* REScoop 20-20-20 (2013). *Best Practices Report*, pp 17-19. Available at http://rescoop.eu/best-practices; and O'Hara, E (2013). Europe in Transition: *Local Communities Leading the Way to a Low-Carbon Society*. The European Association for Information on Local Development (AEIDL). Available at http://www.aeidl.eu/en/news/whats-new-at-aeidl/539-leurope-en-transition-quand-le-local-ouvre-la-voie-vers-une-societe-sobre-en-carbone.html.

support schemes for renewable energy; land use planning and other local regulatory frameworks; grid ownership and management; and energy market and supply. By 'law', we refer to instruments of a legally binding nature such as EU and national legislation, rules and regulations, and court judgments. By 'policy', we refer to initiatives and documents of an official – but not legally binding – nature, such as high level policy statements, technical guidance and codes of practice. This approach allowed us to understand and compare the different contexts in which renewable technologies have developed, and to identify what legal frameworks have promoted community power.

Why we need model legislation and how to use this report

The recommendations suggested by this report are not intended to be a 'one-size-fits-all' model for enabling community power. First, we acknowledge and appreciate the diversity of legal contexts across the EU, which means that not all suggestions will be possible to achieve in all existing systems. Secondly, although the EU's growing responsibility in the field of energy policy operates as a powerful harmonising force, the scope of its competence to act in this sector is still unclear. Responsibility for energy policy is a highly shared competence. In addition to the principle of subsidiarity the treaty provisions on energy arguably allow Member States to retain significant control over the national energy mix.[4]

For these reasons, a strong national commitment to community power will continue to be important particularly until the EU's competence in this field is further clarified. This report therefore focuses strongly on examples of national laws that promote development of community power, which have the potential to be integrated into and tailored to the particular circumstances of other Member States.

National contexts

This report proceeds from the basis that support for community power has been developed in greatly differing national social, economic and legal contexts, and under different energy market design:

Denmark is split up into five regions and 98 municipalities with popularly elected councils governing at both levels. While the national government is responsible for most energy issues, municipal councils are responsible for a number of local and environmental issues, and many are concerned with climate change. There is a long history of community ownership of energy supply in Denmark, with communities coming together to invest in wind turbines since the late 1970s. As such, a greater proportion of renewable energy generation is owned by communities than in other countries. In 2013, renewable energy accounted for about 22% of actual energy consumption and 25% of electricity consumption, and 70-80% of wind

[4] Article 194(2) Treaty on the Functioning of the European Union (TFEU).

turbines in the country were considered to be under community ownership.[5] Furthermore, in 2012 the government made an agreement with a broad majority in the Parliament for a series of measures that would see its entire energy supply covered by renewable energy by 2050.[6] In terms of heating, 60% of domestic housing and 45% of total heat requirement is met by district heating.[7] The energy market in Denmark has also operated relatively outside free market principles, treating both electricity and heating as common goods before liberalising the electricity market in 1999.

Germany is a federal republic, and as such the state (sub-federal) governments *(Bundesländer)* are eager and empowered to influence the local energy mix through control over planning rules and the provision of local energy supply. However, most energy policy is conducted at the federal level. The German government's current comprehensive energy transition strategy, the *'Energiewende',* became prominent in 2011 after the Fukushima Daiichi nuclear disaster. This strategy seeks to completely phase out nuclear power by the end of 2022. Renewable energy has been one of the cornerstones of the *Energiewende,* and has enjoyed popular support from a public that has long called for a better alternative to nuclear. As of 2012, renewables made up 12.4% of gross final energy consumption.[8] Approximately half of installed renewables capacity is under community ownership,[9] and promotion of uptake by individual citizens – particularly solar – has helped to bring prices down significantly. Germany aims to meet 80% of its energy needs from renewable sources by 2050. The main legislative instrument underpinning the *Energiewende,* the Renewable Energy Act (*Erneuerbare-Energien-Gesetz* – EEG), is currently being revised. Nevertheless, Germany has exemplified a stable regulatory framework for renewables development, and community power in particular.

Spain is divided into 17 autonomous communities and two autonomous cities. These autonomous regions have specific competence for land use planning policies, but much of energy policy is reserved to the national government. Support for renewable energy in Spain has led to a high penetration of renewable energy in the market, with figures for 2013 showing that renewables made up 49.1% of installed power capacity, and 14.3% of gross final energy consumption.[10] However, this has not yet translated into a high level of community ownership. The energy market in Spain is also dominated by a few large energy companies which dominate the agenda. The economic crisis, and a 'tariff deficit' created by long-term regulation of energy prices has seen retroactive policy changes, and additional barriers imposed on further renewable energy development. There are, however, examples of community power projects in Spain and there is great potential to increase the share of community ownership in the energy system, particularly as there is a desire for change. Legislative and policy reforms will help to encourage this.

The United Kingdom (UK) has a largely centralised system of energy governance. In Great Britain (England, Wales and Scotland) responsibility for energy policy remains the preserve of the UK government. Northern Ireland is the only exception within the UK, where responsibility for energy is essentially devolved, due to the fact that it shares a physically connected single energy market with Ireland. However, even within Great Britain certain powers are devolved to Scotland and Wales, especially land use planning. By using this responsibility, the Scottish government has used land planning to promote renewable energy, and now enjoys the largest proportion of renewable energy development in the UK. Community ownership has also enjoyed a greater level of support in Scotland than in other areas of the UK, reflected in Scotland's (non-binding) target of 500 MW of community and locally-owned renewable energy by 2020. There is also a growing community energy movement in England. Since the 1980s, the UK's energy market has been based heavily on free market principles, and is currently dominated by six large energy suppliers. At the end of 2012, renewable energy sources made up 4.1% of gross final energy consumption in the UK, and 10.8% of gross electricity consumption.[11]

[5] Margrethe Basse, E (2013). "The Conditions for Future Energy-Smart Water Utilities under EU and Danish Law and Policy", *Scandinavian Studies in Law,* Vol 60, p 33; and Kingsley, P (2012). "Windfarms: is Community Ownership the Way Ahead?" *The Guardian* (5 November (2012). Available at http://www.theguardian.com/environment/2012/nov/05/windfarms-community ownership.

[6] Danish Ministry of Climate, Energy and Building (2012). *DK Energy Agreement, March 22, 2012.*

[7] Margrethe Basse, E (2013). *"Environmental Law in Denmark"* (Kluwer Law International: The Netherlands), p 270.

[8] Eurostat (2014). *Renewable Energy in the EU 28,* STAT/14/13 (10 March 2014). Available at http://epp.eurostat.ec.europa.eu/tgm/table.do ?tab=table&init=1&language=en&pcode=t2020_31&plugin=1.

[9] Agentur für Erneuerbare Energien (AEE) (2013). *Ownership of Renewables in 2012.*

[10] Red Eléctrica de España, S.A.U. (2013). *The Spanish Electricity System Preliminary Report 2013.* Available at http://www.ree.es/sites/ default/files/downloadable/preliminary_report_2013.pdf.

[11] Department of Energy and Climate Change (DECC) (2013). *Digest of United Kingdom Energy Statistics.* Available at https://www.gov.uk/ government/uploads/system/uploads/attachment_data/file/279523/DUKES_2013_published_version.pdf.

Community Power and the EU Climate and Energy Agenda

The EU has a strong mandate to act on climate change, which is enshrined in the EU Treaties. At a strategic level, Article 3 of the Treaty on EU (TEU) commits the EU to 'work for' sustainable development and a 'high level' of protection and improvement of the European environment. Article 11 of the Treaty on the Functioning of the EU (TFEU) also requires environmental considerations to be integrated into the definition and implementation of EU policies. Article 191(2) of the TFEU, which sets out EU objectives and legal competences, requires the EU to take action on environmental and climate change issues. The Lisbon Treaty amended the TFEU to give the EU new competence to pursue a number of energy objectives, including to promote energy efficiency and energy savings, and to develop new and renewable forms of energy, which must be pursed 'with regard' to the need to preserve and improve the environment.[12] Therefore, any action taken by national governments to support community power (other than laws that pertain strictly to land use planning, which is the exclusive competence of Member States) is strongly influenced by the legal framework created and developed at the EU level.

The current EU energy law framework provides a degree of recognition of the importance of community power and the broader role that citizens can play in the low carbon energy transition. The main legislative instruments are: Directive 2009/28/EC on the promotion and use of energy from renewable sources (Renewables Directive), Directive 2010/31/EU on improving energy performance in buildings, Directive 2012/27/EU on energy efficiency, and Directives 2009/72/EC and 2009/73/EC concerning common rules for the internal market in electricity and gas, respectively (the IEM Directives). These instruments recognise the need to inform and promote public awareness of renewable energy and energy efficiency, and to include a role for local and regional authorities. Furthermore, a number of individual measures provide a basis for Member States to support community power, which if effectively implemented can benefit communities that want to participate in, or own their own renewable energy. This report recommends that Member States can do much to advance support for community power by optimising their implementation of existing EU rules.

However, this report also recognises that the current EU framework poses limits to the community power agenda. The EU legal framework lacks explicit recognition and support for community power. In addition, it still largely treats citizens as passive consumers and beneficiaries of the energy transition, rather than potential active participants. Furthermore, as currently applied, some IEM principles (e.g. the free movement of goods, the freedom of establishment and the freedom to provide services, and rules on State aid) may actually constrain Member States' ability to provide effective support to community power. This report therefore recommends that the EU framework should itself be recalibrated to provide a more elaborate and explicit legal basis for community power. Reform of this nature will ensure that the design of the IEM more fully optimises the pathway to European energy decarbonisation objectives.

[4] Article 194(2) Treaty on the Functioning of the European Union (TFEU).

Recommendations for Legal Frameworks that Enable Community Power

The recommendations presented below are important to support the growth of community power. The 'core' recommendations in particular are fundamental preconditions for supporting community power and require immediate action. The rationale for the recommendations is elaborated in more detail in the full report analysing current regulatory environments and identifying best practice; they should be read in conjunction with that report. References to sections in the following recommendations refer to the full report.

Core Recommendations

1. National legislation and policy should not define 'community power' restrictively. It should promote a wide range of models for citizen ownership and participation in the production and/or use of sustainable energy.
2. Legal frameworks should ensure at least partial community 'ownership' of, and effective 'participation' in, commercial renewable projects, either by statute or best industry practice.
3. In order to provide direction and certainty, governments (at all levels) should establish targets (ideally binding) for renewable energy and, more specifically, targets for community power.
4. Community power projects should not be subject to competitive bidding processes in order to receive operating support; instead, they should be eligible to receive feed-in tariffs.
5. National laws should incentivise community power projects based on 'self-sufficiency' (e.g. direct marketing and production for self-consumption), for instance through investment and tax relief, or reduced charges on energy consumption.
6. Governments (at all levels) should provide financial support (e.g. grant-to-loan, guarantee, or cheap credit opportunities) for preliminary investigations and works on community power projects.
7. Local governments, with support from national governments if appropriate, should use planning powers to require integration of renewables and energy efficiency measures into public, new and renovated buildings, streamline requirements for community power projects into a one-stop-shop approach, and provide guidance to assist navigation of regulations.
8. 'Community leadership' should be eligible as a material consideration for planning decisions relating to renewable energy projects.
9. Laws should provide equitable grid access for community power projects; reinforcement costs should fall on the grid operator as part of a continuing duty to ensure integration of renewables and ensure security of supply.
10. National laws should not impose overly-restrictive requirements on community power projects wishing to become owners/operators of network grid infrastructure or fully licensed suppliers of green energy.
11. The EU's 2030 Climate and Energy reform process should include consideration for more explicit promotion and support for community power, particularly through integration into relevant existing EU legislation.

General Recommendations

Chapter One – Creating Effective Ownership Models for Community Power

What we mean by 'community energy'

1 Community power should not be a restrictive term. Laws and policies should enable diverse forms of local and citizen ownership and participation in renewable energy in order to secure the full range of benefits of community power, including contributing towards renewable energy generation, resiliency, energy self-sufficiency, the creation of social capital and local capacity, and financial benefits to community investors and local communities. Different legal forms and national laws (e.g. company law, energy supply law) should support the delivery of these ultimate aims. This includes allowing socially-oriented and customer-owned enterprises, foundations, municipalities and individuals to participate in community power (Section 1.1).

2 If possible, communities should be able to utilise a combination of different ownership models, with a mix between public, community foundation, and/or commercial ownership. Such diversity of community ownership models promotes wide participation in ownership and management, and in realising benefits, particularly for individuals that do not have sufficient funds to invest. Where municipal companies are established, they should be subject to public information duties and answerable to members of the public similar to government bodies, to ensure transparency and accountability (Section 1.2).

Mandatory community involvement in commercial renewable energy projects

3 Legal frameworks should ensure at least partial community 'ownership' of, or 'participation' in commercial renewable energy projects. Such ownership or participation may be mandated by statute (Section 1.4.3), or flexible through establishment of best industry practice (Section 1.4.2). Regardless of form, schemes need to promote full and effective dialogue and involvement with communities in order to ensure genuine financial and other benefits for the community (e.g. energy measures, addressing fuel poverty, employment, etc.), and must avoid being used as a payoff for public acceptance (Section 1.4.1) [see further under Chapter Four below].

Chapter Two – Government Commitment, Leadership and Direction

High level commitment to renewable energy and decarbonisation

1 In order to provide direction, governments at national, regional and local levels should demonstrate leadership through expressing ambition to act on climate change, for instance through commitments and/or targets to reduce greenhouse gas (GHG) emissions, and to promote renewable energy and energy efficiency (Section 2.1.1). If appropriate, a target for community power should also be set. If possible, this should be established combining both binding legislation and policy (Section 2.1.2). Such ambition can provide a rationale for more targeted support for community power, as well as provide investor certainty, boost local and regional economic development, help local employment, and have a positive influence on foreign trade exchange balance.

2 Member States need to ensure they comply with EU legislative instruments that provide a basis for national level action to support community power. In particular, Member States should use national planning processes under relevant EU directives to develop support measures for community power. Once developed, governments should refrain from arbitrary or retroactive changes to such measures in order to ensure investor certainty (Section 2.1.3).

Sub-national leadership and coordination of support for community power

3 Local and regional governments should play a strong role in promoting community energy. In particular, local authorities can directly support community energy through development of sustainable energy action plans, which provide a basis for integrating community power into appropriate local level regulatory frameworks (Section 2.2.1(i) – (iii)).

4 Local authorities should support community power through the development of rules for public procurement to satisfy energy consumption needs of municipal buildings. For instance, local authorities may decide to source 100% consumption from renewable energy sources, and devise tendering procedures that take community participation into account (Section 2.2.1 (iv)).

5 Regardless of how responsibilities are divided between different levels of government, roles and responsibilities for different aspects of community power must be clearly defined, and ensure coherence and reinforcement between all levels (Section 2.2).

6 Guidance is a very useful tool for communicating with different community power stakeholders. National governments should promote coherence and reinforce the role of local level authorities through guidance on how to implement legal frameworks. Guidance should also be provided by government at various levels to assist citizens navigate relevant regulations (e.g. permitting, licensing, eligibility for financial incentives), and access other technical and financial support (Section 2.2.2 (i)).

Chapter Three – Optimising Financial Support Schemes

Supporting community power projects to produce and export renewable energy

1 Where possible, national support schemes should allow smaller community power projects to be eligible to receive fixed-price feed-in tariffs (FiTs) (Section 3.1.1). At the very least, community power projects should not be subject to competitive bidding processes in order to receive operating support (Section 3.1.3). If competitive bidding schemes exist, such as tendering or auctions, they must contain regulatory safeguards to ensure that larger developers and energy market incumbents do not benefit at the expense of community power projects, resulting in them being crowded out of the energy market (Section 3.1.2).

2 In order to maintain long-term sustainability and social justice, FiT schemes should be adaptable over time, and equitably apportioned among all energy consumers in line with the polluter pays principle (Section 3.1.1).

3 If moving away from direct subsidies for community power installations, national laws should promote alternative incentives including realised savings on energy bills or other taxes (e.g. net metering schemes), or by incentivising self-sufficient community power projects that directly market their energy to nearby customers (Section 3.1.4). Such measures can help promote grid stability, greater energy awareness, and reduced costs and energy consumption [see further under Chapter Six below].

Support for investment in community power

4 Governments at all levels should provide financial support for preliminary investigations and works on community power projects (Sections 3.2 and 2.2.2 (ii)). Socially responsible investment and smaller amounts of investments in community power from households should be supported through preferential tax rules, for example through income tax exemptions or reductions (Sections 3.2.1 and 3.2.2). National and local governments should also provide special tax relief for construction of community installations (Section 3.2.3).

5 Governments should establish grant-to-loan schemes to support community power projects in preliminary investigations and works (e.g. feasibility studies, obtaining planning permission). In particular, national rules and procedures should allow structural or other funds to be used to establish such support mechanisms (Section 3.2.4). National and/or local governments should also use public financial institutions to provide community projects with special loan guarantees, or cheap credit opportunities (Section 3.2.3). Such assistance helps to leverage and unlock other private investment in renewable energy, and provide additional investor certainty.

Chapter Four – Integrating Community Power into Spatial Planning Frameworks and Simplifying Permitting Procedures

Integrating community power into spatial planning frameworks

1 National level planning documents should provide a strong basis for promoting community power at regional and local levels (Section 4.1.1). Where regional or local spatial planning frameworks are established, these should prioritise support for community renewable energy projects above other types of energy development (Section 4.1.2 – 4.1.5).

2 At the municipal level, community power should be integrated into local regulatory frameworks, for instance through requirements to integrate renewable production capacity in new and renovated buildings (Section 4.1.4). In addition, local authorities should make it as easy as possible for individuals and community groups to assess the viability of renewable energy development, for example through the creation of solar maps.

Simplified permitting procedures for individual community power projects

3 Permitting requirements for renewable energy projects should be based on a sliding scale according to size. This should include simplified procedures for smaller community power projects and minimal requirements for micro-installations, either through pre-approval or simple notification for specified classes of installations (Section 4.2.3). Where additional requirements exist they should be streamlined through a one-stop-shop approach (Section 4.2.4).

4 Rules for assessing and responding to impacts from renewable energy installations (e.g. noise, visual, shadow flicker, impacts to protected areas) should be set out as clearly as possible, and consistently applied (Section 4.2.1). This can help improve public confidence and legitimacy in the planning process, and promote investor certainty. Such rules should also be supported by clear guidance and support services from local authorities to assist ordinary citizens in navigating legal requirements.

5 'Community leadership' should be eligible as a material consideration for the planning approval process for renewable energy projects (Section 4.2.2). This can help to demonstrate that the project has backing from the local community, increasing the legitimacy of such projects.

Citizen engagement

6 In designing spatial planning frameworks for renewable energy development, guidance should be provided at the appropriate level regarding minimum participation measures required by law and ways to exceed these to ensure transparency, and to encourage participation from all sectors of society (Section 4.3.1). This can enhance legitimacy, ensure democratic accountability, and provide additional certainty for individual projects later on.

7 For the planning of individual projects, local or regional governments should develop measures (supported by guidance and recommendations) that go beyond minimum legal requirements on public participation and access to information. Such processes should ensure a deliberative process with all relevant stakeholders, rather than just consultation. Where possible, local authorities should consider how to include

disenfranchised groups who do not usually participate in the planning process (e.g. the elderly, ethnic minority groups) (Section 4.3.2).

Chapter Five – Letting Community Power Flow: the Grid

Facilitating grid access for community power

1 Laws should prioritise grid access for community power projects. In order to guarantee sufficient space for community power, there should be a clear continuing duty for grid operators to expand grid capacity, with a particular focus on the need to integrate new sources of renewable energy (Section 5.1.1) to ensure security of supply. Where access is denied due to lack of capacity, the grid operator should be required to give detailed reasons, and a sufficiently clear timeline for grid expansion (Section 5.1.3). Alternatively, grid access rules should prohibit 'hoarding' of access points by larger developers at the expense of community projects (Section 5.1.1).

2 Rules pertaining to grid connection costs should provide special consideration for community power projects. For instance, connection costs should be capped, with costs for grid reinforcement and expansion falling on the operator as part of a continuing duty to ensure integration of renewables and ensure security of supply. These extra costs should be equitably socialised among energy consumers (Section 5.1.2).

3 Grid connection applications should be streamlined through the relevant grid operator, and easy to follow. It should be the responsibility of the grid operator to deal with issues related to expanding grid capacity, and capacity and technical restrictions should be transparent. Grid operators should be held liable for unreasonable delays connecting community power projects that are caused by the operator (Section 5.1.3).

Maximising community benefits from using the grid

4 Grid operational costs should be made as publicly available as possible. Such transparency brings security for development of community power projects, including larger installations. Such costs should not be prohibitive for community power projects (Section 5.2.1).

5 Community power should be able to effectively contribute to local energy consumption. In particular, network codes should prioritise the use of community power locally (e.g. through measures to promote energy efficiency, demand response, and integration – utilising local prosumers) prior to export. Furthermore, network codes should provide real-time transparency over how decisions between local use and export are made (Section 5.2.1).

6 Where renewable sources of energy must be 'curtailed', there should be a priority to curtail smaller community power sources only after other sources. Where curtailment must occur, grid operators should have a duty to provide a reasoned justification for why the measure was necessary (Section 5.2.2).

Chapter Six – Supporting Effective Energy Citizenship

Community grid ownership and management

1 National or local governments should consider managing grids through public ownership, or as a common good where such assets operate on a non-profit or full cost recovery basis. Regardless of ownership, distribution and transmission operators should have a clear ongoing legal duty to prioritise securing additional capacity for renewables – particularly at the local level – over profits (Section 6.1.1). National law should provide communities with the opportunity to 'remunicipalise' important public services such as energy distribution and supply, either through bidding procedures or referendums (Section 6.1.2).

2 Licensing requirements should not restrict citizen-led or public entities from operating smaller independent grids to provide localised renewable electricity or heat to their community. Member States should also make use of their ability to allow small and isolated grid operators to engage in generation and supply, if necessary (Section 6.1.3). For district heating and cooling networks in particular, rules should ensure that long-term investment is secured, customers are protected, and benefits of renewable energy production are localised, for instance through limiting operations to full cost recovery or non-profit principles (Section 6.1.4).

Beyond renewable energy production: communities as suppliers

3 National laws should not impose overly-restrictive requirements on smaller community-oriented enterprises that want to become fully licensed suppliers of green energy (Section 6.2.2). National regulatory frameworks should also promote community power schemes that minimise use of the local grid through, for example, direct marketing and supply of 'green energy', or production for self-consumption ('auto-consumption'). Governments should, however, also ensure that incentive schemes for such models do not lead to unfair increases in the cost of energy for other users (Section 6.2.1).

What do we mean by ‘Community Power’?

1

At the outset, it is important to understand what we mean when we talk about 'community power', or 'community energy'. For the purposes of the Community Power Project – and this report in particular – we understand community power as projects where citizens own or participate in the production and/or use of sustainable energy. Nevertheless, we appreciate that there is no universally accepted definition and the term can mean different things in different contexts.

The term can also embrace engagement and empowerment, self-sufficiency and local determination, or community awareness around energy issues. Alternatively, it may focus on supporting and/or actively taking part in initiatives linked to energy efficiency and reduced energy consumption.

Our review of on-the-ground practice across different EU Member States has shown that community ownership and participation in the production of renewable energy takes many forms. Community power may range from individual households to various forms of social enterprises, as well as public ownership by municipalities. The choice of form often relates to the interest or goal of the particular community, including but not limited to profit opportunities, special tax treatment, achieving energy autarky (or self-sufficiency), climate goals and community resilience.

Laws often direct who and how community power can organise, and each model of community ownership inevitably has its pros and cons. Nevertheless, it is important that regulatory systems provide sufficient flexibility for individuals and communities to organise in an appropriate way that allows them to pursue their purpose or goal. The following analysis looks at possible community power ownership models under various Member State legal systems.

[13] *See* Friends of the Earth Europe (2013). *What is Community Power?* Available at https://www.foeeurope.org/sites/default/files/what_is_community_power_300113.pdf.
[14] Muller, MO *et al* (2011). "Energy autarky: A conceptual framework for sustainable regional development" *Energy Policy* 39, pp 5800-5810, at p 5801; and Walker, G (2008). "What are the barriers and incentives for community-owned means of energy production and use?" *Energy Policy* 36, pp 4401-4405, at p 4401.
[15] Bomberg, E and McEwen, N (2012). "Mobilizing community energy" *Energy Policy* 51, pp 435-444, at p 436.

1.1 Legal Forms

Creating a distinct legal entity to engage in renewable energy production is not always necessary; it is possible for communities to engage in renewable energy production informally. There are, however, several advantages to creating a distinct legal entity, and in many cases it will be necessary. Reasons to create a legal entity include limiting individual liability (e.g. for debts incurred by the entity); the ability to own property, enter into contracts or receive loans from lenders; formalised rights for each member; and stronger recognition from local and even national authorities.[16]

Most – but not all – organisational types are provided for under national laws that govern companies, foundations or charities. Legal frameworks also regulate municipal involvement in the production and ownership of renewable energy. Lastly, there are a growing number of examples where statutes mandate at least partial community ownership of larger wind projects. This report does not cover all the possible ownership models for renewable energy production; it nevertheless aims to identify appropriate legal vehicles for pursuing community energy ownership.

1.1.1 Partnerships

It is generally possible to establish a community energy project through a partnership. Each legal system has its own particular aspects relating to liability, tax advantages, start up costs and administrative burdens.

Partnerships usually take one of two forms. First, in a general partnership each partner has 'joint and several' liability for debts that are incurred by the partnership. This means that any one partner can be held individually liable for all debts incurred by the partnership. Alternatively, individuals can establish a limited partnership, where a separate corporate body is created. In essence, this shields individual members or partners from certain liabilities.

Establishing a partnership can have a number of benefits. Where there is a small group of people involved and they are in a relatively equal position, they can share profits and distribute responsibilities equally (typically stated through the partnership's 'bylaws'). Furthermore, it is possible for decision making to be more democratic, transparent and informal compared to a traditional company. In general, partners are also taxed individually on their income, so they may – but not always – be able to enjoy certain tax advantages.

In Germany, limited partnerships with a private limited company as a general partner (*Die Gesellschaft mit beschränkter Haftung & Compagn ie Kommanditgesellschaft* – GmbH & Co. KG) are a commonly used legal entity for community renewable energy ownership. These legal entities combine aspects of a limited company (GmbH) with a pure limited partnership (KG).[17] Individuals become engaged through purchasing shares. In doing so they undertake a role as a limited partner with a secure position, limiting their liability up to their share value (i.e. you only risk losing the amount you have paid for the shares and do not take on any further liability), and obtaining co-management rights that are foreseen in the partnership agreement. In turn, the limited company assumes the role of an unlimited partner, thus managing and representing the entity. This can be highly beneficial to the community power project, because it provides for full time expertise to run aspects of the business that may be more difficult for volunteers.

Governance is usually based on each partner's stake in the enterprise, which is usually determined by the monetary value of the shares each partner holds. Nevertheless, bylaws may establish limitations on ownership, determine how decisions are made, and stipulate who may participate. GmbH & Co. KG's are generally governed by a management board, and an advisory board that serves to supervise the management of operations. The management board also convenes meetings of partners, referred to as a general assembly, where they vote on board member appointments and other important issues affecting the GmbH & Co. KG. However, they do not always provide for one member-one vote, as is almost always the case with co-operatives.

[16] *See* Co-operatives UK (2009). *Simply Legal: All you need to know about legal forms and organisational types for community enertprises*, Second Edition, pp 10-12.
[17] German Wind Energy Association (2012). *Community Wind Power: local energy for local people*, p 14.

Germany

The power of partnerships: Windpark Druiberg GmbH & Co. KG, Dardesheim, Germany

Dardesheim is an excellent example of the potential of community power. Dardesheim is a small rural village of less than 1,000 inhabitants located in the state of Saxony Anhalt (former East Germany). Since the early 1990s, it has managed to install an impressive 31 turbines just outside the town, which have an installed capacity of 66 MW. Only local residents are allowed to become partners, and approximately 90% of the village's residents are involved.

The project is driven by a desire to stop the net outflow of domestic production from the region, reinvigorate the area economically, and to generate enough power locally to provide for everyone's energy needs – in other words, self-sufficiency. Organised as Windpark Druiberg GmbH & Co. KG, profits return to local investors from the region. The partnership is run very much like a business, with members hiring professionals to run the project for them. Finance was based on initial capital invested by shareholders, enabling co-financing through commercial credit. In line with the original intent of its founders, profits have been used to expand renewable capacity, which now includes solar, biomass, an electric vehicle storage system and pumped hydro for storage. Profits are also transferred to a local aid association for use in local infrastructure and social projects or cultural events. This flow of income is guaranteed through contractual guarantee within the founding statute of company.

In Denmark, community power projects may be established as general partnerships (*Interessentskab* – I/S), also known as wind turbine guilds *(Vindmøllelaug).* Interestingly, they are also referred to as co-operatives, because of their role as a typical form of 'association', which has strong roots in Danish society. These types of ownerships structures began in the early 1980s by groups of people who would jointly invest in wind turbines, which at that time were too costly for individual ownership.[18]

Under partnership law in Denmark, each partner has joint and several liability, meaning that each partner can individually be held liable for the entire debt of the partnership. While this establishes a higher amount of risk, this can be mitigated by prohibiting the I/S from being allowed to contract debt. This is ensured in the bylaws of the I/S, which can also require adequate insurance for the project. Establishing an I/S, unlike a co-operative in Denmark, also allows individuals to be taxed at a favourable rate for returns on investment, which correlate to average household consumption.[19] An I/S may be used to establish ownership under Denmark's 20% local ownership rule, which will be explained further below in section 1.4.3.

[18] IRENA (2012). *30 Years of Policies for Wind Energy: Lessons from 12 Wind Energy Markets*, p 55.
[19] *See* also Chapter 3.2.

Denmark

An original model of community ownership: Middelgrundens Vindmøllelaug I/S, Copenhagen, Denmark

The story of Middelgrundens demonstrates how citizens can take ownership and participate in larger projects. In 2000, Middelgrundens Wind Farm was established just 3.5 km offshore from Copenhagen harbour. Consisting of 20 turbines with a capacity of 2 MW each, it was established with 50% of the ownership held by the local utility, which is owned by the City of Copenhagen. The other 50% is owned by Middelgrundens Vindmøllelaug I/S. Each share, which sold for 4,250 DKK (€567) corresponds with 1/40,500 ownership of the partnership, representing production of 1,000 kWh per year.[20] In the beginning, membership was limited to residents from the municipal area. However, legislative changes required opening of membership, and now anyone is eligible to become a member.

As stated by its bylaws, the partnership itself is not able to contract debt, which minimises risk to the partners.[21] Governance of the partnership is also highly democratic. Overall decision making is exercised by the Partnership Assembly, which meets once per year.[22] Regardless of the number of shares owned, each partner has one vote. The Partnership Assembly is responsible for deciding on changes to bylaws, election of management and other important decisions.

1.1.2 Co-operatives

Co-operatives tend to pose a natural legal form for community power projects. They combine flexibility, public participation based on a 'one member-one vote' principle, and social responsibility. The German Co-operative Societies Act 1889,[23] for example, foresees that profits do not have priority, but rather that they support members, including culturally or socially.

[20] Sørensen, HC, Hansen,LK, and Mølgaard Larsen, JH (2002). *Realities of Offshore Wind Technologies, Case: Middelgruden, Orkney, October 2002*, p 3.
[21] Middelgrundens Vindmøllelaug Bylaws, articles 13-14.
[22] Middelgrundens Vindmøllelaug Bylaws, article 7.
[23] Trade and Industrial Cooperative Societies Act, passed on 1 May 1889. Available at http://www.ilo.org/images/empent/static/coop/policy/pdf/germany.pdf.

Principles of co-operatives[24]

The International Co-operative Alliance (ICA) identified seven core principles that characterise co-operatives:

1. Voluntary and Open Membership: Co-operatives are voluntary organisations open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
2. Democratic Member Control: Co-operatives are democratic organisations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In general members of co-operatives have equal voting rights (one member-one vote).
3. Member Economic Participation: Members contribute equitably to, and democratically control, the capital of their co-operative. At least part of that capital is usually the common property of the co-operative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their co-operative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the co-operative; and supporting other activities approved by the membership.
4. Autonomy and Independence: Co-operatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative autonomy.
5. Education, Training and Information: Co-operatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operatives. They inform the general public – particularly young people and opinion leaders – about the nature and benefits of cooperation.
6. Cooperation among Co-operatives: Co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional and international structures.
7. Concern for Community: Co-operatives work for the sustainable development of their communities through policies approved by their members."

In Germany, the use of co-operatives – or registered co-operative societies (*eingetragene Genossenschaften* – eG) is expanding. Traditional co-operatives can be set up to pursue various activities (e.g. housing, farming and building co-operatives), and in reality there is no 'energy co-operative' as such. Nevertheless, this ownership model has increased in popularity as a democratic legal vehicle for community investment in renewable energy production. This is illustrated by the fact that in 2006 only two co-operatives were founded in the energy sector, in 2011 that number increased to 111. [25]

In the UK, historically the term 'co-operative' has not been legally defined. Regardless of its legal form, co-operatives tend to be based on a core set of values or principles established by the ICA.[26] However, in the last few years, there has been a surge in registrations of Industrial and Provident Societies (IPSs) for community power projects regulated under the Industrial and Provident Societies Act 1965.[27]

An IPS may take one of two forms: 1) a community benefit society ('BenCom'); or 2) a co-operative society. BenComs are intended to benefit the

[24] *See* http://ica.coop/en/whats-co-op/co-operative-identity-values-principles; and REScoop 20-20-20 (2013) *above* note 3.
[25] German Wind Energy Association (2012), *above* note 17 at p 13.
[26] Co-operatives UK (2009), *above* note 16 at p 28.
[27] As amended by the Industrial and Provident Societies Act 2002, c.20. Available at http://www.legislation.gov.uk/ukpga/2002/20/contents.

community as a whole, whereas co-operative societies are mainly intended to benefit their members. BenComs may also establish an 'asset lock'. This means that if the society is converted into a company or is closed down, the assets cannot be distributed to its shareholders beyond the value of their original investment, thereby ensuring the purpose of community benefit is maintained.

Regardless of the form it takes, an IPS provides equal voting rights for its members (e.g. one-member-one-vote). Furthermore, because IPSs tend to be socially-oriented the interest on shares payable to members is limited to what is "necessary to obtain and retain enough capital to run the business."[28] Nevertheless, both forms of IPS allow a moderate return to investors, and there are fewer administrative and legal requirements associated with an IPS compared to private companies.[29] In particular, IPSs are exempt from onerous and costly regulations relating to share offers.

The United Kingdom

Addressing fuel poverty through co-operative ownership: Brixton Energy, London, UK

Co-operative societies are becoming more prevalent in the UK as a good way to contribute to needs of the community, such as addressing fuel poverty, while obtaining a modest return. This model of co-operative has been used in the London Borough of Lambeth specifically to promote environmental and energy awareness, conservation and energy efficiency for members of the community, and to benefit members of the business. Repowering London, a non-profit organisation with three individual projects in Brixton, has successfully installed solar photovoltaic (PV) on different council estates in Brixton. In order to realise each project, an agreement was reached with Lambeth council to lease the roofs of the buildings of these council estates. Each project is established as a separate co-operative society so that members of each project are able to qualify for relevant tax relief such as the Seed Enterprise Investment Scheme (SEIS).[30] Each project operates subject to democratic and open ICA principles.[31] In particular, there is an emphasis on ensuring that everyone can invest. Although the usual minimum shareholding amount is £250, residents of the estate are allowed to buy shares of £50. Allocation of profits is also determined in line with the co-operative society's bylaws. First, profits are placed in a general reserve to ensure continuation and development of the project; then a modest dividend is paid to individual shareholders. At the co-operative's annual general meeting, the members then vote to determine an amount that will go into a Community Energy Savings Programme (CEEF). The CEEF was established so profits could directly assist vulnerable members of the community. Money from CEEF goes towards measures to reduce cold draughts from windows and doors, energy efficiency improvements and education initiatives.

[28] Financial Conduct Authority, Mutuals Change of Rules I&P, CU, FS 74 (N), April 2013. Available at http://www.fca.org.uk/.
[29] Co-operatives UK (2009), *above* note 16 at p 25.
[30] *See* Chapter 3.2.1 below.
[31] For Rules of different Brixton Energy Projects, *see* https://brixtonenergy.co.uk/about-us/.

1.1.3 Community trusts and foundations

Ownership models based on community trusts or foundations are good for making sure that returns on investments are used for specific local or community purposes. They are different from commercial models of investment in renewable energy in that they are intended to act as vehicles for broader community benefit, rather than individual profit for particular members. This allows local citizens that do not have enough money to invest to participate in the benefits that are created from community power. This ownership model may take a couple of different forms, both described below.

i. Development Trusts in Scotland

In the UK, 'Development Trusts' are enterprises that usually engage in activities designed to regenerate the local community, which usually focus on economic, environmental or social issues. Development Trusts may take a number of different legal forms: a charity, a company limited by guarantee, a community interest company (CIC) or an IPS. A Development Trust has no owners or shareholders, and income derived from the Trust's activities is reinvested into the community or the organisation. A board of trustees (similar to a board of directors for a company) oversees key decisions in the functioning of the Trust. In order to maintain wide community representation, various community interests should be represented through democratic election to the board.

In Scotland, Development Trusts have become a popular form of community ownership of wind projects. Because most Development Trusts are established as charities, they experience difficulty entering into contracts, and protection from liability is weak. Furthermore, while they may receive grants, it is harder to obtain loans from banks. Therefore, involvement in renewable energy projects by Development Trusts is better achieved through the establishment of an IPS or a CIC.

The United Kingdom

Getting creative with Development Trusts: Harlaw Hydro, Balerno, Scotland, UK

The Harlaw Hydro community energy scheme is a good example of how Development Trusts can use IPSs to get around some of the hurdles involved in community power ownership. Balerno is a suburb on the outskirts of Edinburgh, Scotland. Historically, the Leith river that runs through Balerno powered around 70 mills. Concerns over climate change and the need for green energy are now driving the local revival of hydro technology. In September 2012 the Balerno Village Trust (BVT) set up Harlaw Hydro Ltd, an IPS, to install and manage a hydroelectric scheme at the local Harlaw Reservoir. As an IPS, Harlaw Hydro was able to raise the necessary capital investment through a share offer, something the legal structure of BVT does not allow. The share offer successfully raised more than the amount required, and was therefore able to reduce the amount of debt it took on at the outset. Harlaw Hydro aims to produce 65kW of electricity and feed this to the national grid. The revenue generated from feed-in tariff (FiT) payments will pay a return on investment for shareholders and benefit the wider community through the BVT.

ii. Community foundation model in Denmark

In Denmark, the community foundation model has been used to create a community pot of money where generous profits from renewable energy production can go towards funding local development. Pioneered and piloted by Wind People, a local NGO, this model generally resembles that of a Trust Fund. In particular, the community foundation model is useful in peripheral or rural areas in order to support community resilience, although it need not be limited to this context.

Community foundations are regulated by the Commercial Foundation Act 1985.[32] The foundation is usually established by local associations and businesses, which under the Act must collectively bring together at least DKK 300,000 (approximately €40,000).[33] However, these entities do not hold ownership rights over the foundation, and therefore

[32] Commercial Foundations Act, Consolidated Act No. 652 of 15 June 2006, as amended.
[33] Commercial Foundations Act, Chapter 4, Section 9.

cannot control how revenue from the project is used. Instead, the foundation is its own legal person, and profits go to the community purposes for which it has been established.[34] However, the objectives and conditions for how profits are used are established by the foundation's founders. Therefore, it is important to ensure that the bylaws of the foundation reflect the needs and interests of the community – not just the founders. To ensure independence, there is a prohibition on majority representation by any of the founders of the foundation.[35]

The community foundation also has a special lower tax rate. Specifically, it is able to pay out part of its profits in the form of grants, which are predetermined by the foundation's bylaws. These payouts are deducted from the foundation's taxable income, which lower its tax expenses overall.[36] Due to a statutory requirement to offer 20% ownership of wind projects to the local community, the community foundation model will usually be combined with another private ownership model (such as an I/S) or even municipal ownership.

Denmark

Securing local economic resiliency: Hvide Sande Community Foundation, Hvide Sande, Denmark

Hvide Sande represents how small communities collectively benefit from renewables projects, not just individuals that have money to invest. Hvide Sande is a small fishing community with the fifth largest port on the west coast of Denmark. In 2010, the local Homsland Dunes Tourism Association, along with local unions, industry and utilities, established a community foundation for the purposes of constructing three offshore wind turbines of 3MW on shoreline owned by the harbour.[37] This allowed the project to both maximise wind potential, and to get around strict planning restrictions, which usually prohibit installation of wind turbines within 300 metres of the shoreline. Prior to the establishment of the foundation, private developers had been unsuccessful in gaining authorisation for a similar project, mainly because of public dissent. Because it was community led, the project proposed by the community foundation was successful.

While the project benefits the tourism association, it was also intended to broadly contribute towards local development of the harbour and the community. According to its bylaws, the foundation has a purpose to "support the development of Hvide Sande harbour and the tourism in Ringkøbing/Skjern Municipality by production of renewable energy."[38] The foundation owns 80% of the project, while the other 20% is owned by Hvide Sande Nordhavn Møllelaug I/S, a partnership, as required under national law. The board is made up of members from within the community, including two representatives from the harbour. Furthermore, members from the tourism association are prohibited from serving on the board in order to maintain independence. The harbour also benefits from an annual rent of DKK 4.8 million paid by the foundation.[39] Once established, the foundation raised the appropriate amount of capital; then, as a distinct legal entity, it borrowed the rest from a local lending institution. Once this is paid off (estimated at between 7-10 years), the foundation will have approximately €1.2 million per year to spend on local development.

[34] Pozzi, L *et al* (2013). *Ownership Models for Wind Turbines with a Focus on Regional Development and Local Acceptance,* Study conducted under the Sustainable Energy Planning and Management Department, Aalborg University, p. 42.
[35] *Ibid.*
[36] *Ibid.*
[37] Maegaard, P (2013). *Wind Energy Requires Broad Local Acceptance. Hvide Sande: 100% Community-owned Wind Turbines,* p 9. (Nordic Folkecenter for Renewable Energy: Hurup Thy).
[38] Fonden Hvide Sande Erhvervsudvikling (2011). Translated by Pozzi, L *et al* (2013), *above* note 34.
[39] Maegaard P (2013), *above* note 37.

1.1.4 Non-profit customer-owned enterprises

Non-profit customer-owned enterprises may be ideal for community power projects that rely on a small or independent grid network. In Denmark, co-operative limited companies (*Andelsselskaber med begrænset ansvar* – A.m.b.A.'s) are a popular model for community ownership of district heating, although they are certainly not limited to this activity. This ownership model became used because historically, while municipalities generally took care to provide district heating in urban areas, in rural and semi-rural areas such activities were performed by local citizens themselves. Today there are more than 200 local consumer owned plants providing district heating, many of which also produce electricity. A growing number of plants also produce between 5% and 20% of the heat from thermal solar.

Generally, A.m.b.A.'s are similar to other co-operatives, in particular because they are governed by a general assembly (i.e. a meeting of all shareholders), with each property that is eligible for connection to the grid having one vote. However, when engaging in district heating activities, they may have special rules. First, in order to be an owner, you may need to be connected to the grid. Votes may also be capped to limit the power of individuals who own multiple properties. This arrangement ensures that the enterprise remains committed towards benefiting the local community through reliable and affordable service.

Rules around A.m.b.A.'s have also been influenced by Denmark's recognition of the need to ensure stable long-term investments in district heating and cooling networks, and to protect consumers from monopolies. Therefore, all district heating companies are treated as non-profit entities where any realised profits must be given back to consumers through savings on bills ('real cost' recovery).[40] Due to a narrow exemption from this principle, an A.m.b.A. that produces heating from renewable sources is able to benefit from some subsidies, such as the ability to receive municipal guarantees, and attractive governmental grants and loans with low interest rates. This allows A.m.b.A.'s to play a significant role in communities that aim towards decarbonisation of energy needs.

Denmark

Customer-led steps towards a renewables future: Ærøskobing District Heating A.m.b.A., Ærø, Denmark

District heating in Denmark represents a unique model for community leadership in developing renewable heating. Ærø is a small island-municipality in the south of Denmark, with a population of just under 7,000. Ærø has been active in promoting renewables since the 1980s, with the goal to meet 100% of its energy needs from locally produced renewable energy. Ærø's three district heating stations, all customer-owned, have helped lead these efforts. In particular, Ærøskobing District Heating A.m.b.A. provides heating from solar, straw and wood pellets. Since 1998, the facility has been utilizing thermal storage, slowly developing additional capacity through the continued expansion of its solar farm. This means that straw and wood pellets provide heat only after solar capacity has been used; in the summer months, solar produces 75-100% of the heat requirements for the district.[41] Because these expansions required Ærøskobing District Heating to take out loans, impacting member-customers' heating bills, a vote was required in the general assembly.[42] However, broad support for renewable energy among the members meant that making this commitment was not a problem.

1.1.5 Housing associations

Generally, housing associations are private non-profit organisations that offer housing to individuals and families with low income or special needs. Often as distinct legal entities (e.g. in the UK they may form as an IPS, co-operative society, or a company limited by guarantee), they tend to be highly regulated in order to ensure that tenants are provided with manageable rent and appropriate living standards. Their powers stem from their governing statutes, which usually relate to improving accommodations – covering heat.

[40] Heat Supply Act 2000, Consolidated Act No. 772 of 24 July 2000.
[41] Ærøskøbing Fjernvarme A.m.b.A. (website accessed 24 April 2014). Available at http://www.aeroe-varme.dk/.
[42] Statutes of Ærøskobing District A.m.b.A. Available at http://www.aeroe-varme.dk/.

Residents usually have limited control over decisions made by the housing association. Where empowered, however, housing associations can provide a useful vehicle for addressing particular issues, such as fuel poverty. In Denmark, the law on social housing provides tenants with the ability to exercise self-governance through 'tenant's democracy'. Based on the Consolidated Act on Social Housing, etc 2009,[43] tenants living in the social housing estate are members of the association, and are in charge of the upkeep of the estate (e.g. decisions on maintenance, approval of the budget, improvements and repairs, house rules, running of common rooms and social initiatives). Since 1984, tenants have had a right to a majority of seats on the board of housing associations. The board is typically elected at a general meeting by the tenants.[44] Furthermore, in running the estate, decisions are taken by a majority vote of the tenants themselves. Possessing characteristics of a legal entity, the housing association can take out loans and undertake projects, for instance to install solar on roofs. Such projects can be financed by adjusting the rents of the tenants. Hence, these projects require majority buy-in by the tenants at the general meeting.

Denmark

Tenant's democracy at work: community solar in Hvidovrebo, Denmark[45]

Hvidovrebo is a good example of how community power can be used by more vulnerable groups of society as a means to address their own social issues. Hvidovrebo Section 6 is a social housing estate located in a municipality on the outside suburbs of Copenhagen. The estate was constructed between 1953 and 1955 as one of the first industrialised complexes in Denmark. Therefore, it is subject to a local preservation plan. Consistent with the law pertaining to housing associations in Denmark, it operates based on tenant's democracy. Using this model of self-governance, the tenants decided through a consensus of the General Assembly that they would like to produce electricity from solar PV and water heating from solar thermal. Because the estates' roofs were already in need of renovations, solar construction and installation was integrated into the process. Because it is a protected landmark, careful consideration has had to be given to the planning of the project in order to ensure conservation of the building's appearance. The project will be owned by the housing estate, but the tenants will contribute financially to the project through additions on top of rent or mortgage payments. The project will span 10 roofs throughout the estate, producing between 120-160 MWh per year. The electricity produced will contribute towards self-sufficiency within the estate. The aim is that each dwelling will have its own part of the system, which will be operated through a common grid. The project is being implemented in cooperation with the local district heating company, Hvidovre South A.m.b.A. The company has conducted and financed feasibility studies on how to integrate solar PV with solar heating, the latter of which will be financed by the company.

[43] Act to consolidate the Act on Social Housing, etc., cf. Consolidation Act No. 870 of 11 September 2009 as amended by section 1 of Act No. 490 of 12 June 2009, part II. Available at http://english.sm.dk/MinistryOfSocialWelfare/legislation/social_affairs/social_housing/Documents/Consolidation%20Act%20on%20Social%20Housing.pdf.

[44] Pittini, A (2011). *The Place of Inhabitants: Resident's Participation in Creating Sustainable Housing & Neighborhoods,* p 7. (CECODHAS Housing Europe and l'Union Sociale pour l'Habitat).

[45] Excerpts sourced from Halberg, F and Christiansen E (2011). *Fra bevaringsværdig til bæredygtig bevaringsværdighed – integration af solenergi i en bevaringsværdig boligafdeling i Hvidovrebo* (Fjernavarmeselskabet Hvidovre Syd A.m.b.A. and EBO Consult A/S).

1.1.6 Other socially-oriented enterprises

In addition to the examples already listed, there are other legal entities that may be created for the purpose of carrying out a community power project, particularly where there is a community or social purpose that the project seeks to support. In some cases, it may be possible for charities to engage in community renewable energy production. However, it should be noted that charities are not explicitly recognised as distinct legal entities in all legal systems. In such cases, a charity can take a number of forms, such as an unincorporated association, or even as a private company. It will always be important to check the legal status of a charity.

In the UK, for example, a charity may assume the legal form of a private company, or even an IPS (described above). Regardless of its legal form, a charity is identified by its objects, which are stated in its bylaws. In order for an organisation to be considered a charity it must be established for the purpose of furthering one of a number of listed 'charitable objects'. It is possible to undertake community energy projects as a charity. For instance, many Transition Towns, which bring together citizens at local level to enact practical solutions to issues such as climate change, are charities.[46] Transition Towns are often incorporated as a company limited by guarantee and registered as a charity. This allows them to embark on community energy projects as part of a broader set of charitable objectives such as educating and raising awareness over climate change, increasing community resilience, and sustainable development.

Under the UK Charities Act 2006,[47] there is also a new regulatory development that allows charities to incorporate as a Charitable Incorporated Organisation (CIO). Simply stated, a CIO is a form of incorporation that is meant to fit a charity.

In the UK, an organisation may also be able to register as a Community Interest Company (CIC). A CIC represents a distinct legal form that is established as a private limited company (by shares, or guarantee), and is regulated under company law.[48] A CIC is designed to benefit the community rather than its shareholders. CICs must pass a 'community interest test' and commit to an 'asset lock', similar to BenComs, which ensure that they are established for community purposes and the assets and profits are used principally for the benefit of that community. They also typically include special governance and participation provisions in their governing statutes. CICs can pay limited dividends to shareholders and their share offers are fully regulated, which can add to the regulatory and financial burden of the initial stages of a project. While a CIC is not able to benefit from tax exemptions that are applicable to charities, as explained in Chapter Three, CICs may be eligible for special tax exemptions for investments in renewable energy.

1.1.7 Individuals

Within the renewable energy context, it is also important not to forget the individual and their role as a 'prosumer' – not just a consumer, but also a producer of renewable energy. Prosumers also have a role to play in demand side management, energy efficiency, and energy storage, which is important in facilitating further integration of local renewable energy production, and broader energy citizenship. More generally, to the extent that individuals may comprise families, groups of friends and other local associations, they constitute mini-communities. Where large groups of individuals produce renewable energy independently – say, through the installation of solar on their own homes – they can also make up a larger local community of interest. For these reasons, it is important not to lose sight of the individual citizen within the community energy debate.

1.2 Municipal Ownership

Local governments also have a potentially strong role to play in community ownership and participation in local renewable energy production. Prior to privatisation, municipalities were at the centre of providing public services such as heat, electricity and water. While liberalisation of markets for these goods and services has transformed how these resources are governed, the need to invest in decarbonisation and the prospect of generating renewable energy to revitalise local economies has led to more municipalities taking a leading role in community power, particularly for electricity and heat.

1.2.1 Public utility companies

In many countries, municipalities have historically played some type of role in the provision of energy. In Denmark, for example, since around 1900 – when the first municipal utility for electricity was established in Copenhagen – municipal companies have spread across the country in order to ensure sufficient investment in supply and infrastructure.

[46] For more information on the Transition movement, see www.transitionnetwork.org/support/what-transition-initiative.
[47] Charities Act 2006, c.50, section 34 and schedule 7. Available at http://www.legislation.gov.uk/ukpga/2006/50/section/34.
[48] Companies Act 2006, c.46, section 6. Available at http://www.legislation.gov.uk/ukpga/2006/46/contents.

Under the Electricity Supply Act and the Heating Supply Act, municipalities are allowed to participate in activities related to the provision of both electricity and heating,[49] including production, transport, trade or supply, and other closely related activities.

In Denmark, if a municipality possesses administrative powers over the provision of a certain service such as water, waste or heating it must handle its activities through a separate company; a separate company is also required if public authorities generate electricity from wind. Most utilities set up a separate enterprise, typically organised as a Public Limited Liability Company (*Aktieselskab* – A/S), or a Private Limited Liability Company (*Anpartsselskab* – ApS). In order to prevent municipal companies from obtaining a dominant position in the local economy, the law on Electricity Supply also limits the use profits from the sale of electricity production to fund activities related to the original activity.[50] If the municipality uses dividends from the project directly for other purposes, federal grants for which it is eligible are reduced accordingly.

Denmark

Municipal ownership of offshore wind: Samsø Energy Company ApS, Samsø, Denmark

Samsø is a very good example of municipal leadership in renewable energy. It has a long-standing reputation as a 'renewable energy island' on a mission to become free from fossil fuels. While Samsø only has approximately 3,500 inhabitants there are a number of renewable initiatives across the island, each featuring different aspects of community ownership. For its part, the municipality helped to lead the development of an offshore wind farm as a means of pursuing its goals of becoming carbon neutral. In 2002, when 10 turbines were installed the municipality created Samsø Energy Company ApS in order to take ownership for five of the turbines (citizens own the other five through a co-operative, Samsø Vindenergi). The board overseeing the company consists of the municipality, the Samsø Agricultural Association, the Samsø Business Forum and Samsø Energy and Environment Office.[51]

The law on Electricity Supply, which limits how profits from the turbines may be used, has created complications for the municipality, and in general has caused national confusion over how municipal energy companies can take additional steps to promote decarbonisation with revenues from the sale of renewable energy. While this law has the justifiable rationale for limiting the dominance of municipal companies in local commerce, it has also been seen as a factor that has limited municipal leadership on climate and energy issues. While there is room for clarity in this area, it still serves as a good example of how municipal-led initiatives can drive sustainable energy growth at a local level.

[49] Act on Electricity Supply 2005, section 4; Act on Heat Supply 2000, section 23g.
[50] Act on Electricity Supply 2005, section 37. See also Regulation 2008-11-27 nr. 1133 on Municipalities and Energinet.dk's participation in other activities which are closely related to the main activities under the Electricity Supply Act.
[51] Nordic Folkecenter for Renewable Energy (2013). *Danish Examples of Community Power.* Translation from the Memo Wind as a Lever for Local Development in Peripheral Areas, made by Rambøl for Nordic Folkcenter for Renewable Energy.

In Germany, there has been a strong push for many municipalities to become carbon neutral or energy self-sufficient. Local governments have typically engaged in the supply, production and distribution of energy through the form of public or municipal utilities *(Stadtwerke).* The activities of these municipal utilities are largely based upon regional *(Bundesländer)* Municipal Codes, which determine the limits of their economic engagement.[52]

Stadtwerke are usually organised as limited liability companies (*Die Gesellschaft mit beschränkter Haftung* – GmbH), or public companies (*Aktiengesellschaft* – AG) to initiate renewable energy projects. The *Stadtwerke* may be owned by the municipality itself (publicly owned), or by a private company through shareholding structures – either entirely, or partially. Where publicly owned, however, the *Stadtwerke* may contain a governance structure that allows local residents to be involved in decision making.[53] This demonstrates an important institutional arrangement that provides citizens with transparency and a way to hold decision makers accountable for prioritising investments around renewable energy production and promoting community benefit. In Schwäbisch Hall, Germany, the local *Stadtwerke,* which serves approximately 37,000 inhabitants, is 100% owned by the city. It has been a particular leader in renewable energy development, generating 26% of its electricity from renewable energy sources such as combined heat and power (CHP) and solar PV, and it aims to have fully green electricity production by 2030. It has also taken a leadership role in helping neighbouring localities utilise this model.

Municipalities should be able to play a leadership role in generating local community power. However, it should also be recognised that municipal utilities are not immune from placing profits ahead of the public interest. In order to ensure renewable energy production remains community centred, where arms length municipal companies are established they should be subject to public information duties similar to government bodies, to ensure transparency and accountability. Furthermore, laws should properly balance the ability for public utilities to participate in community ownership, while promoting space for local competition and cooperation with other community ownership models.

The United Kingdom

Muncipal ownership to address fuel poverty: Aberdeen Heat & Power Ltd, Aberdeen, Scotland

The story of Aberdeen shows how public authorities and private enterprises can come together to promote both social and low carbon objectives. In 2001, the Aberdeen city council undertook a long-term effort to address the poor quality and energy rating of a majority of the city's council housing stock, as well as fuel poverty. Following a study, which suggested that CHP and district heating could be a cost effective option for addressing these issues, in 2002 the council established Aberdeen Heat & Power. It was created as an arms-length non-profit company, limited by guarantee. The company's mission is to deliver clean affordable energy with low environmental impacts to drive socio-economic benefits for the citizens that it serves. Aberdeen Heat & Power mainly provides heat to approximately 1,530 flats in 22 multi-story blocks (to address fuel poverty) – and nine public buildings. Since it was established the company has incrementally developed 7-8 district heating projects. In order to fund particular projects to develop the network, the council has been able to access capital grant funding, which is intended for improving housing stock. Furthermore, the council has provided a range of financial services on a contractual basis with the company, in order to give it a good start and ensure proper financial procedures were established. The council sets the direction for the company, maintaining a right to have two directors of the board. Council and tenant representatives also contribute to the company's governance by being represented on the board. However, the board maintains a hands-off approach with regard to everyday operations. Surplus funds from the company's operations are used to fund further development of the network. According to surveys, network development and connection has resulted in improved customer satisfaction and lower heating bills. Furthermore, various developments have resulted in between 42 and 57% carbon reductions.[54]

[52] Schönberger, P (2013). *Municipalities as Key Actors of German Renewable Energy Governance: An Analysis of Opportunities, Obstacles, and Multi-Level Influences Wuppertal Papers,* Nr. 186, January 2013, p 22 (Wuppertal Institut für Klima, Umwelt, Energie GmbH).

[53] Hockenos, P (2013). *"Local, Decentralized, Innovative: Why Germany's Municipal Utitlities are Right for the Energiewende,"* September 2013.

[54] Travers, T (2009). *Cutting Carbon Locally – and How to Pay for it: How to get Serious about Climate Change,* p 29. Prepared by Tony Travers and Arup for Friends of the Earth.

1.2.2 Cooperation between municipalities: public-public partnerships

While municipalities can be responsible for providing public services in the immediate area, they are not limited to acting alone. Municipalities may join together to create co-operatives where they themselves are the members. Such models, while still rare, present unique opportunities for regional cooperation, not just in renewable energy production but also in grid ownership. In Belgium, where municipalities own and operate much of the electricity distribution network, they often enter into co-operatives. More on public control of grid infrastructure is covered in Chapter Six.

Germany

A co-operative between municipalities: Neue Energien West eG, Upper Palatinate, Germany[55]

In Germany, municipalities are demonstrating how local authorities can participate in the co-operatives movement. In 2009, eight municipalities from the region of Upper Palatinate, in Germany, came together to establish a co-operative society called NEW (Neue Energien West eG). The objectives of this inter-regional co-operative are to become independent of fossil fuels, and the integration and participation of individuals in regional renewable energy projects. Only municipalities and corporate bodies under public law are eligible to become members, therefore excluding private companies or associations. Since its establishment, the number of local authorities and public organisations participating in the co-operative has grown to 20. The co-operative focuses on installing solar PV in the region. In order to ensure access to financial resources, another co-operative, Bürger-Energiegenossenchaft West eG was established as a separate financial arm.

1.3 Public-Private Partnerships

Public-private partnerships (PPPs) are also a good way to both maximise efficient use of local resources and promote community power. There are a number of ways public authorities can enter into formal partnerships, both with community groups and other private enterprises.

First, local authorities can enter into agreements with community groups to help realise projects, for instance by making public roofs available for installation of solar. In the UK, Transition Town Totness, a charitable company, entered into an agreement with the local council to install solar panels on Totness Civic Hall, which supplies approximately 13,000kWh of the building's energy needs per year.[56] Ownership of the installation is split between the council and Transition Town Totness 60:40.

Municipalities can also partner with socially or environmentally-minded private for-profit enterprises. This can provide access to much needed technical expertise, access to additional finance, and business planning. Despite privatisation, many municipalities have either retained partial/majority ownership in public utilities, or have subsequently repurchased shares in them. In Freiburg, for example, the city maintains a 32.76% share of the regional utility service, Badenova. The relationship between the two entities recognises the inherent social element to power provision. There is an underlying expectation of price management and that a certain amount of profits will go towards promoting renewable energy, energy efficiency and energy savings measures.

1.4 Mandatory Community Involvement in Renewable Energy Projects

As governments become more aware of the benefits of community ownership, some are trying to ensure that renewable energy development remains community focused. This is partly a response to the growing dominance of large-scale developers in what has traditionally been a space occupied by local citizens. It is also partly an attempt to sway negative attitudes towards renewable technologies, particularly wind. Whatever the reason, rules requiring community participation or ownership for larger projects have the potential to ensure that communities realise benefits from local renewable energy production and get actively involved in the low carbon transition.

[55] Excerpts sourced from ENNEREG – Regions paving the way for Sustainable Energy Europe. Available at www.regions202020.eu.
[56] Transition Town Totness (2011). *So, What Does Transition Town Totnes Actualy Do? The Story So far... 2006-2010,* p 5.

1.4.1 Distinguishing community ownership and participation from community benefit

It is important to distinguish between 'community ownership' and 'participation' in a local project versus 'community benefit'. Community benefit may be seen as a gesture made by a commercial renewable energy developer to a local community to make sure it receives some of the benefits from the project, such as income (based on fixed sum per MW installed per year), employment, savings on energy bills, or additional measures to tackle other issues (e.g. energy efficiency).[57] This may also be perceived as goodwill, compensation or a payoff, and still treats citizens as passive consumers. Community ownership and participation, on the other hand, suggests that the community itself is taking at least some responsibility for aspects of the project.[58] Unlike community benefit, ownership and participation actually get individuals involved in the project, helping them to realise their broader potential as energy citizens.

Some countries have developed more of an expectation for developers to provide local communities with benefits, while others require more direct ownership and participation. It is important to point out that no matter which type of model is utilised communities must be able to meaningfully 'participate', or engage, in the individual project planning process. This is a separate albeit related topic covered more fully in section three of Chapter Four.

The United Kingdom

Models for shared ownership: Susenco and Berwick Solar Farm, England, UK

The development of Berwick Solar Farm in East Sussex, England, shows how commercial developers and community enterprises can work together to ensure successful planning outcomes. Susenco, a commercial renewable energy developer, agreed with the owners of Batbrooks Farm to develop a solar farm on their site of up to 12MW. As part of the plans Susenco offered local residents the opportunity to set up a community-owned enterprise to take ownership of a section of the farm and to manage and raise money for it. As a result, residents are setting up Cuckmere Community Solar Company. The intention is that community shareholders will get a return on their investment and surplus income will be spent on community projects. This model of part-commercial, part-community ownership helped persuade the local authority of the merits of the scheme, and the solar farm received planning permission last October. Once operational, the combined commercial and community areas of the solar farm will meet the electricity needs of around 2,300 homes and will save around 116,000 tonnes of CO2 emissions over its lifetime, contributing to UK renewable energy and climate change targets.

1.4.2 Community benefit schemes in Scotland

In Scotland, the focus of policy has been more towards community benefit, although not exclusively. In order to provide flexibility, the Scottish government has taken a non-prescriptive approach, and there are no statutory obligations concerning community benefit schemes. Instead, community benefit schemes have been largely driven by commercial developers on a case-by-case basis. Developers are expected to enter into dialogue early on with local authorities and citizens in order to establish a community benefit scheme

[57] Meacham, T (2012). *Renewable Energy: Community Benefit and Ownership SPICe Briefing 12/71,* Scottish Parliament Information Centre (SPICe), p 3.
[58] *Ibid.*

that suits both the developer and the community. Under this general policy, several local governments have established community guidelines or toolkits, which establish certain expectations vis-à-vis the developer.[59] Furthermore, the Scottish government has set up a Community Benefit Register with the intent to "encourage transparency and consistency in [the] community benefits process and [to] help communities negotiate with developers and understand better what can be achieved."[60]

In its 'Community Energy Strategy', the rest of the UK is looking to the Scottish model as it aims to work with developers to establish best industry practice standards for the development of partnership agreements to share benefits with local communities. Going further, the Community Energy Strategy also sets out plans to work with industry and community groups to increase community ownership of new commercial developments, and to set an overall level of ambition for community ownership of new renewable energy developments. The UK government aims to produce guidance on this issue in 2014.

1.4.3 Denmark's statutory obligation for local citizens' option to purchase

In Denmark, renewable energy began as a grass-roots movement. Therefore, community initiatives have played a large role in the growth and development of renewable energy. However, due to liberalisation, industry growth and technology advancement (e.g. the size of turbines has increased) commercial developers have come to dominate development. This has contributed to a retreat in public support for further development among many local communities.

As a response, in 2008 the Danish Parliament passed the Promotion of Renewable Energy Act, which requires developers to offer 20% of overall ownership shares of wind projects larger than 25 metres (in height) to eligible persons.[61] The law excludes various installations including those for self-consumption, large offshore wind farms, and wind farms that are established further than 16 km from the coastline.[62] The law provides a 'preferential right' to buy the first 50 available shares to eligible persons that live within 4.5 km of the project.[63] Remaining shares must then be offered up to eligible individuals that reside in the local municipality.[64]

Rules established by the Act govern ownership, the offer and purchase of shares, and oversight of this 20% ownership scheme. In order to ensure that buyers are conveyed influence, dividends and risk corresponding to their investment, turbines covered by the Act must be operated by an independent legal entity.[65] The Act also governs 'how' and 'when' offers may be made; the acceptance of offers; what to do if a project is oversubscribed; restrictions on the ability to take on debt and personal liability; and limitations on the transfer of ownership shares. In practice, ownership under this scheme often forms as a wind turbine guild *(I/S or Vindmøllelaug).* They have also been combined with other community ownership models. For instance, in Hvide Sande 80% of the 9 MW wind project is owned by the community foundation, while the other 20% is owned by the local *Vindmøllelaug.* It is also conceivable that these two ownership models could be combined with a municipal partner, presenting opportunities for community collaboration and ownership.[66]

The Danish government also offers a slightly higher feed-in tariff (FiT) payment in exchange for offering an additional 10% (making a total of 30%) ownership to the local municipality that has coastal land within 16 km of the project.[67]

It should be noted that the 20% ownership requirement has not always worked as well as intended. For instance, it has not guaranteed acceptance by local citizens (e.g. some individuals still see the scheme as a bribe), there are not always enough citizens interested in buying in, and the system has been open to abuse. This demonstrates a potential limitation in legal frameworks that require community ownership, which needs to be balanced with the promotion of 'community-led' projects.

[59] Local guidance policies on community benefit have been developed by Dumbries and Galloway Council, the Scottish Borders Council, Argyll and Bute Council, and the Highland Council, for instance. *See* Meacham T (2012), *above* note 57 at pp 8-9.
[60] Scottish Government (2012). *2020 Renewable Routemap for Scotland – Update,* p 24.
[61] Promotion of Renewable Energy Act 2008, Act no. 1392 of 27 December 2008, Part 1, section 13.
[62] *Ibid.* at section 13 (2).
[63] *Ibid.* at section 15 (1). this is based on having an address that is registed with the Civil Registration System. Homeowners of recreational flats or houses are not entitled to purchase shares under this scheme. *See* Explanatory notes to Bill L 135 proposed on 6 February 2013.
[64] *Ibid.* at section 15(2).
[65] *Ibid.* at section 13(5).
[66] This idea is being presented and tested by WindPeople, which foresees various combinations of fund, commercial and municipal ownership models as a way for communities to become energy self-sufficient.
[67] Danish Energy Agency (2012). *Model for Near-shore Wind Turbine - Memorandum.* Available at http://www.ens.dk/en/supply/renewable-energy/wind-power/offshore-wind-power.

1.4.4 Local 'direct participation' requirements in Belgium

Regional and local governments are also trying to do more to promote community ownership. In Oost-Vlaanderen and Limburg, two provinces in Flanders, Belgium, it was decided that future wind projects will need to include direct participation by the local population which amount to at least 20% (10% local municipality and 10% citizens) in ownership and management of large wind turbines.[68] These decisions were largely motivated by the perceived need to reallocate burdens and benefits of wind development to benefit communities. Operational aspects of these regulatory models are currently being developed at the local level. In the Walloon Region of Belgium, the government is currently working on *'le Cadre de Reference'* (the Frame of Reference), which will govern the development and siting for new wind projects. Although it still requires approval by the regional Parliament, under le cadre de reference future wind projects would need to offer 24.9% of 'direct' citizen participation, in addition to 24.9% participation by the relevant local authority. This essentially means that developers would need to offer 24.9% of direct ownership in the project to local citizens.

[68] Provincial Council of Limburg (2013). Environmental and Natural Management Area – Planning and Policy, File 124.04.10/ S2013N075158 (20 November 2013). Only available in Dutch.

Providing Government Commitment, Leadership and Direction

2

Effective support for community power requires commitment from governments at local, regional, national, and even supranational (EU) levels. This can range from high level policy support and soft commitments, which provide signals to market participants, to technical and detailed legal requirements, which establish regulatory certainty. It requires governments at different levels to assume various roles, depending on their level of responsibility, and capacity for providing policy, political and administrative leadership. In order to maximise efficiency and optimise synergies, cooperation and coordination between different levels of government is also required.

This chapter will survey the various areas where governments can provide leadership in creating an enabling legislative environment for community power. The chapter will start with the higher levels of energy governance (e.g. at the EU and national level), and make its way down to the local level, where community power projects are realised.

2.1 High Level Commitment to Renewable Energy and Decarbonisation

International recognition of the need to reduce greenhouse gas (GHG) emissions has provided a strong basis for support for renewable energy at national and EU level.[69] International law commitments have been translated by the EU into a law and policy framework that covers not just renewable energy, but other important issues such as energy efficiency. Currently, the EU's climate change objectives for 2020 include targets to reduce GHG emissions by 20%, to increase the share of renewable energy to 20%, and to make a 20% improvement in energy efficiency.[70] Within this framework, individual Member States have committed to specific policies and legislation, some of which promote community power.

2.1.1 National targets and commitments

National level targets, or ambition to reduce GHG emissions or increase the share of renewable energy provides a strong high level framework for the adoption of more focused laws and policies to support community power.

In Denmark, community power was initiated in the late 1970s by communities who started developing wind co-operatives in order to reduce dependency on oil and present an alternative to nuclear. In response, the Danish government slowly began introducing policies and financial mechanisms to support renewable energy. In 1985, the government banned nuclear power development, and agreed to develop at least 100 MW of wind between 1986 and 1990.[71] In 1991, a feed-in tariff (FiT) was established to support electricity generation from wind, and in 1994 incentives for energy efficiency were passed. In 1996, in its Third Energy Action Plan the government proposed an objective to have 50% of electricity consumption by 2030 met by wind. These high level national commitments helped to drive the growing community power movement in Denmark.

In addition to decarbonisation, renewable energy development can be organised around other priorities, such as competitiveness, job creation, and innovation. Spain, a country that until recently was seen as one of the EU's leaders in wind and solar, based its development on a strong desire for economic growth and to become an industry leader. Much of the wind development that took place during the mid-1990s occurred alongside policies to support local manufacturing.[72]

The United Kingdom

Legal and political frameworks for climate change: The UK Climate Change Act

The UK Climate Change Act 2008[73] is a good example of how a legally binding framework for managing long-term reduction of GHG emissions can help facilitate support for community power. The Act sets out a legally binding national emissions reduction target of 80% by 2050 compared to a baseline of 1990, and a range of steps intended to work towards that goal including an interim target of 34% by 2020. These steps include carbon budgets for set periods within that timeframe, and an independent advisory committee on climate change to advise the government and to help monitor progress in meeting targets. Along with international and EU commitments, within this framework the government has developed supportive policies for renewable energy, and is now developing targeted measures for community power under its 'Community Energy Strategy'. While imperfect, this overall framework has helped provide certainty for investors in renewable technologies and projects, which in turn should assist community projects by reducing costs and attracting private investment.

Similarly, in 2009 Scotland passed its own Climate Change Act.[74] Like the UK Climate Change Act, it sets a binding emissions reduction target of 80% by 2050. However, it sets an even higher interim emissions reduction target of 42% by 2020. This has helped provide a framework for further measures, such as an ambitious Renewables Action Plan, with a 100% renewable energy target for 2020, and targeted support for community power, explained in more detail below.

[69] United Nations Framework Convention on Climate Change (UNFCCC), (9 May 1992) 1771 UNTS 107; and Kyoto Protocol to the UNFCCC, (11 December 1997) 2303 UNTS 148.
[70] European Commission (2010). *Energy 2020: A Strategy for Competetive, Sustainable and Secure Energy,* Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee of the Regions, COM(2010)639.
[71] IRENA (2012), *above* note 18 at p 55.
[72] *Ibid.* at p 115. *See* also Lewis, J and Wiser R (2005). Fostering a Renewable Energy Technology Industry: An International Comparison of Wind Industry Policy Support Mechanisms, (Earnest Orlando Lawrence Berkeley National Laboratory, November 2005), pp 13 and 19.
[73] Climate Change Act 2008, c. 27. Available at http://www.legislation.gov.uk/ukpga/2008/27/contents.
[74] Climate Change (Scotland) Act 2009, asp. 12. Available at http://www.legislation.gov.uk/asp/2009?sort=title.

High level targets and ambition for GHG reductions and renewable energy do not replace the need for developing and maintaining targeted support for community power. In Denmark, for example, high level support, combined with electricity liberalisation and advances in technology have contributed to increased development of large commercial scale projects. This development has occurred at the expense of community-led projects, and public support in Denmark – particularly for wind – is now beginning to fall. A number of laws and policies to maintain community involvement have since been enacted to maintain public support, demonstrating why specific policies aimed at community power are needed. Even so, evidence would tend to suggest that political commitment at the national level towards a low carbon energy transition has helped to support the growth of community power. Therefore, we would recommend that Member States commit to long-term and ambitious national decarbonisation and/or renewable energy targets or objectives, if possible through legally binding measures and a long-term process that ensures those targets are met.

2.1.2 Carving out a space for 'community power' in the policy-making process

As more Member States recognise the value of community power, including its ability to help achieve climate change and local development objectives, some are exploring the creation of an explicit policy space for its development. Doing so can help maintain a focused support for community power based on the sector's needs, for instance through the direction of stable financial or technical support.

The United Kingdom

Setting the framework: Community power targets and strategies in the UK

In Scotland, the government has committed itself to achieve "500 MW of community and locally-owned renewable energy capacity in place by 2020."[75] This has helped to grow a movement explicitly recognised by the government, and the development of specific mechanisms to provide support to community energy projects. This movement has arguably helped influence the UK government's development of its own Community Energy Strategy, which was released in early 2014. This Strategy, which applies throughout the entire UK, lays out the government's plans for how it intends to develop greater support for community energy in the coming years. The Strategy was developed with input from a Community Energy Contact Group, a platform whose members represent community energy practitioners throughout the UK, as well as a Community Energy Coalition, whose members represent a wider group of interested stakeholder, including many national NGOs.

As pointed out in Chapter One, 'community power' means different things to different people. Merely trying to define it could potentially exclude actors that do not fit within its scope. Therefore, governments need to be careful when developing a policy framework for community energy. In Scotland, the government has refrained from defining the term. Nevertheless, in 2014 the UK government will consult on what the concept should mean. We would recommend that governments define community power in a flexible manner.

In terms of generating renewable energy, it may be more practical to focus on 'ownership' or 'participation'. As this could still be fairly broad, it may be helpful to start by determining what is 'not' community energy in order to remain inclusive yet limit the potential for abuse so that support can be provided to a broad range of communities.

In a 2012/2013 evaluation conducted by the Energy Saving Trust, which was requested by the Scottish government, "community and locally owned" was loosely defined. The Trust's definition includes

[75] The Scottish Government (2011). 2020 Routemap for Renewable Energy in Scotland, section 3.9 on Community Renewables. Available at http://www.scotland.gov.uk/Publications/2011/08/04110353/0.

community groups, local Scottish business, farms or estates, local authorities, housing associations, other public bodies and charities.[76] Importantly, it loosely associates community with a sense of locality. It also distinguishes between different levels of ownership and where benefits are provided to communities and/or individuals but are owned by an outside developer. This raises an important distinction that was mentioned at the end of Chapter One: that community benefit does not necessarily equate to community ownership. Thus different frameworks and levels of support are likely to be appropriate for different types of community power, with direct ownership in community-led projects meriting greater support.

2.1.3 Implementation of EU legislation that supports community power

The role of European law is also critical in driving and shaping how, and to what extent, Member States provide support for community power at national level. Responsibility for energy policy is shared between the EU and Member States. The EU has adopted a considerable legal framework in this sector. Support for community power can be provided by Member States through optimised implementation of existing European rules (discussed below), which offer important supports for this agenda. However, the existing European framework could itself be reformed to ensure more effective support for community power which in turn would intensify Member States' ability to act.

The supports for community power provided within the existing EU legal frameworks can be summarised as follows. While Directive 2009/28/EC on the promotion and use of energy from renewable sources (Renewables Directive)[77] does not address 'community power' explicitly, instead it contains implicit obligations that allow, and even require, Member States to act. These include rules that govern administrative procedures for processing, authorising, certifying, and licensing installations and grid infrastructure;[78] information, awareness-raising, guidance, and training to inform citizens about renewable energy by local authorities;[79] and priority access, costs for connecting to the grid, and expanding its capacity.[80] Such obligations can contribute to ensuring that citizens are capable of navigating regulatory frameworks (e.g. through guidance and/or simplification of permitting requirements), and to ensure that community power projects can connect and use the grid. Member States are also required to develop national renewable energy action plans (NREAPs) detailing measures effectively designed to ensure they reach their binding targets.[81] Unfortunately, Member States have repealed or failed to follow through with measures contained in their NREAPs.[82] Furthermore, they have not always been of a good quality, and have not specifically addressed community power. Nevertheless, NREAPs are a governance tool that, if properly deployed, can provide regulatory and investor certainty. Therefore, Member States should use the NREAP process to develop specific and stable measures for supporting community power.

Provisions from Directive 2010/31/EU on improving energy performance in buildings also promote community power.[83] Specifically, on-site or near generation of renewable energy is meant to play an important role in Member States meeting their obligations to ensure that all new buildings are 'nearly zero-energy buildings' by 2020.[84] This includes specific obligations to develop national plans, including policies and measures for increasing the number of nearly zero-energy buildings.[85] Such obligations are important, particularly for community power produced from micro-installations on houses and other large buildings, including public buildings. In addition, Directive 2012/27/EU on energy efficiency (Energy Efficiency Directive) requires Member States to undertake cost benefit assessments for undertaking measures to develop 'efficient' district heating and cooling, and to adopt policies that encourage local and regional governments to consider its development.[86]

Finally, Directive 2009/72/EC and Directive 2009/73/EC concerning common rules for the internal market in electricity and gas, respectively (the

[76] Energy Saving Trust (2013). *Community and Locally Owned Renewable Energy,* p 3.
[77] Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ 2009 L140 p 16 (Renewables Directive).
[78] Renewables Directive, articles 22(3)(a) and 13(1).
[79] Renewables Directive, article 14(6).
[80] Renewables Directive, article 16.
[81] Renewables Directive, article 4.
[82] *See* Rybski, R (2013). "Directive on the promotion of the use of energy from renewable sources" in Stoczkiewicz, M (ed) *Black Paper: Implementation of EU Climate and Energy Law in Poland,* (ClientEarth: Warsaw), p 21.
[83] Directive 2010/31/EU on the energy performance of buildings (recast), OJ 2010 L153 p 13.
[84] A nearly zero-energy building means that the building has a very high energy performance, with very little energy consumption required. Directive 2010/31/EU, articles 2(2) and 9(1).
[85] Directive 2010/31/EU, article 9(2).
[86] Directive 2012/27/EU on Energy Efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (Energy Efficiency Directive), OJ 2012 L315 p 1, article 14. Under article 2(41), 'efficient district heating and cooling' means a system using at least 50% renewable energy, 50% waste heat, 75% cogenerated heat or 50% of a combination of such energy and heat.

Internal Energy Market – or IEM – Directives), aim to ensure that development of renewable energy remains consistent with internal market principles, such as the free movement of goods, the freedom of establishment, and the freedom to provide services.[87] These directives aim to enhance the independence of grid operators, which is important in protecting community power projects from discriminatory treatment when trying to both access and use the grid. However, they may also pose barriers on developing measures to favour community production, distribution and supply of renewable energy.[88] For instance, requirements for local distribution networks to remain open to third parties pose a potential risk that larger suppliers will overtake local suppliers.[89] Furthermore, special provisions on closed distribution systems, internal networks and direct lines are too narrow in scope to account for community power.[90] The IEM Directives also address the need for Member States to facilitate cross-border access for new suppliers, but without addressing overly onerous licensing requirements that may prevent smaller or community-oriented suppliers from entering the market.[91]

However, the existing EU framework also operates to constrain community power. In particular, EU internal market rules have the potential to limit the extent to which Member States create national support schemes that prioritise local renewable energy production, which directly impacts community power.[92] New EU State aid rules, which are discussed in-depth in Chapter Three, will further limit the types of financial support that Member States can provide to community power. In addition, the EU legal framework lacks explicit recognition and support for community power.

EU energy law should be reformed to provide a more elaborate and explicit legal support for community power and to recalibrate the IEM framework to ensure that it supports communities endeavouring to produce and supply renewable energy. Nevertheless, we would emphasise that the most immediate supports for community power are to be found in optimised national implementation of the existing European framework.

2.2 Sub-national Leadership and Coordination of Government Support for Community Power

Community power requires support at all levels of government. There are specific ways that local and regional governments can support the growth of community power. However, this must be coupled with appropriate support and coordination at the national level. The following sections highlight how local and regional authorities can coordinate with national governments to provide leadership in promoting community power.

2.2.1 Roles for local and regional government in promoting community power

In some Member States, major decisions on energy are decided at the national level. However, in other Member States responsibility for energy is shared between national and lower levels of government. The role of local and regional governments in particular in promoting renewable energy is recognised in the Renewables Directive:

> *"Member States may encourage local and regional authorities to set targets in excess of national targets and to involve local and regional authorities in drawing up national renewable energy action plans and in raising awareness of the benefits of energy from renewable sources."*[93]

Local governments can also use their powers in other areas to implement binding regulations that support community power development, for instance in the context of spatial planning and building regulations. In Denmark, under Section 82 of the Constitution, the municipalities and regional councils are in a relatively independent position, and municipalities are responsible for regulating heating services.[94] Therefore, to the extent that energy issues have impact at local and regional levels, municipalities are important actors. How some of these responsibilities have been carried out at the local level is highlighted below.

[87] Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, OJ 2009 L211 p 55 (Third Electricity IEM Directive); and Directive 2009/73/EC concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, OJ 2009 L211 p 94 (Third Gas IEM Directive).
[88] Pront-van Bommel, S and Bregman A (2013). "European Legal Framework on Distributed Energy Systems in the Built Environment," *European Energy and Environmental Law Review* Vol 22(5), pp 168-180, at p 171-173.
[89] Third Electricity IEM Directive, articles 12(h) and 32(1).
[90] Third Electricity IEM Directive, recital 30, article 28, article 34.
[91] Third Electricity IEM Directive, recitals 8, 35 and 57, and article 3(4).
[92] *See* Case C-573/12 *Ålands Vindkraft AB v Energimyndigheten,* Opinion of the Advocate General Bot, presented on 28 January 2014; Cases C-204/12 to C-208/12 *Essent Belgium NV v Voor de Vlaamse Reguleringsinstantie Elektriciteits- en Gasmakt (VREGT),* Opinion of the Advocate General Bot, presented on 8 May 2013; and Case 195/12 *Industrie du bois de Vielsalm & Cie (IBV) v Région wallone,* Judgement of the Court (Fourth Chamber), presented 26 September 2013. At the time this report went to print, opinions from the CJEU were forthcoming.
[93] Renewables Directive, recital 23.
[94] *See* also Margrethe Basse, E (2013), *above* note 7 at p 27.

i. Regional targets

To complement national level energy policy, regional and local governments should be able to establish 'soft' non-binding policy objectives or targets to reduce GHG emissions, or support renewable energy. This can drive targeted local and community development of renewable energy. In the UK, even though energy policy is the responsibility of the UK government, the Scottish government has developed its own more ambitious Renewables Action Plan, with a 100% renewable energy target for 2020, and a community power target. Similarly, in Spain where energy remains a national concern a number of the autonomous regions have established regional targets or plans.

In Germany, states *(Bundesländer)* are increasingly passing laws to encourage renewables through the establishment of regional targets. In Baden-Württemberg, for instance, a Wind Decree establishes a 10% target for production of 'domestic' wind power by 2020, which has the legal force of a joint administrative regulation *(Verwaltungsvorschrift)*.[95] The Decree is only binding on the three ministries that agreed to it; nevertheless, it acts as guidance to regional planning authorities, municipalities, and authorities responsible for urban land use planning.[96]

ii. Municipal 'energy action plans'

Municipalities can also provide political support and vision for local community power development. Increasingly, municipalities are committing themselves to meeting or exceeding national ambition on climate change. This has been expressed largely through the articulation of targets or local energy and climate action plans. In Germany and Denmark, many municipalities have committed themselves to becoming '100% Renewable Energy Regions' or 'climate municipalities', respectively.[97] These commitments provide an important public interest rationale for specific measures to promote community power.

More broadly, over 5,000 local authorities across the EU have committed to reducing GHG emissions by 20% and to increase their share of renewable energy by 20% by 2020, through their commitment to the Covenant of Mayors (CoM) Initiative.[98] The CoM commits local authorities to develop a Sustainable Energy Action Plan (SEAP) to reach their targets within two years. These SEAPs can be used to support community power, which contributes to the realization of local targets.

iii. Integration of community power into local regulatory frameworks

Regional and local governments often have substantial authority to act in spatial planning (e.g. urban and rural land use) and other areas of regulation such as building standards. This is particularly prevalent in federal legal systems (e.g. Germany, where prioritisation of renewables is allowed at local level through a guarantee of local self-government under Article 28 of the Constitution, or Basic Law), or where there is a substantial degree of devolved local governance (e.g. the UK and Spain). In England, local authorities are allowed to integrate energy into local development plans, which are encouraged to promote community initiatives.[99] In Denmark, municipalities are required to establish spatial planning frameworks for wind, larger solar and fuel plants and heating networks. Integration of community power into local planning frameworks is covered in more depth in Chapter Four. The important point to note in this context is that local and regional governments possess, and should be encouraged to use, local powers to promote community power.

iv. Public procurement

Municipalities can contribute towards low carbon objectives while promoting community power through their choice of what electricity to purchase and consume. Public procurement is governed at EU level by Directive 2004/17/EC on coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors;[100] and Directive 2004/18/EC on the coordination of procedures for awarding public works, supply and service contracts.[101] These are intended to provide a common procedural framework across the EU. However, each Member State will have transposed these rules into its national law and there will inevitably be some variation on the exact provisions that apply in different countries.

There is a clear principle that the contracting authority itself gets to decide what it wants to buy, providing it respects the rules on how to set

[95] Lang, M and Mutschler, U (2012). "Baden-Württemberg Enacts New Wind Power Decree," *German Energy Blog* (15 May 2012). Available at http://www.germanenergyblog.de/?p=9368.
[96] *Ibid. See* also http://www.wind-energie.de/verband/landes-und-regionalverbaende/baden-wuerttemberg.
[97] *See* Solarenergie-Förderverein Deutschland e.V. (SFV) (accessed 25 April 2014). Available at http://www.sfv.de/.
[98] *See* Covenant of Mayors website. Available at www.eumayors.eu.
[99] Department for Communities and Local Government (DCLG) (2013). Planning Practice Guidance for Renewable and Low Carbon Energy, July 2013, para 6.
[100] Directive 2004/17/EC on coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors, OJ 2004 L 134 p 1.
[101] Directive 2004/18/EC on the coordination of procedures for awarding public works, supply and service contracts, OJ 2004 L 134 p 114.

criteria for different stages of relevant decision making processes. These rules include general principles of transparency and non-discrimination. Furthermore, public procurement practices should not undermine the cohesion of the internal market; therefore, discrimination based on nationality, and setting criteria that give local operators an unfair advantage is prohibited. However, environmental performance issues are accepted as a characteristic that contracting authorities can require when they establish minimum requirements for procurement (known as technical specifications).[102] For instance, the City of Rubi, Spain, which is a member of the CoM initiative, recently decided that it wanted all municipal buildings to use only electricity from renewable sources. Therefore, in its tender contract it included a requirement for 100% of electricity to be supplied from renewable energy sources.[103]

Furthermore, in its evaluation of tenders, contracting authorities can choose to take into consideration more than just the price (known as choosing on the basis of the 'most economically advantageous tender'). This means that contracting authorities can look at other social and economic factors in assessing bids, as opposed to just the lowest price offered. In this scenario, evaluation criteria are chosen by the contracting authority, but must actually be relevant to the product or service being purchased, rather than the tenderer's general activities. Such criteria could provide local authorities with the discretion to take broader considerations into account, perhaps such as social and environmental benefits of community power.

The United Kingdom

Promoting community power through public procurement: Edinburgh City Council, Scotland, UK

The Edinburgh city council provides a potential model for how tendering policies can help to promote community power. The local coalition government has a shared commitment to deliver on a number of 'Pledges' published under the coalition contract. This includes Pledge 53, which aims to "encourage the development of Community Energy Co-operatives." In putting this pledge into practice, the city council has agreed to allow Edinburgh Community Solar Co-operative to seek tenders for the development of a community energy project that generates electricity from solar panels installed on roofs of council-owned properties in Edinburgh. In particular, the following criteria form part of the assessment:

Criteria	Weight	Notes
Price	50%	Total project costs including VAT
Team	15%	Team experience; Company experience in terms of scale and relevance of projects
Qualifications, capacity and capability	30% 5%	Technical and professional qualifications and experience; Relevant capability and experience working with community organisations

[102] Directive 2004/18, article 23(3)(b), and recital (29). *See* also Case C-448/01 *EVN AG and Another v Austria* (Stadtwerke Klagenfurt AG and Another, intervening) [2003] ECR I-14527, where the European Court of Justice found that the authority concerned was justified in awarding a criterion of 45% in favour of electricty produced from renewable energy sources to decisions on where to contract its energy supply.

[103] *See* Ajuntament de Rubí website. Available at http://www.rubi.cat/ajrubi/apartats/index.php?apartat=3339.

It should be noted that the revised directives governing public procurement will shortly come into force. Between 2014 and 2016, Member States will be transposing revised provisions into national law.

2.2.2 Tools and resources to empower community action

Laws and policies alone can be insufficient to create a favourable environment for local community power. Where regional and local governments are required to abide by national rules, they may need further guidance, or technical or financial assistance to effectively implement such obligations. This is also the case for the implementation of local action plans or targets. Furthermore, local regulations may be confusing or hard for citizens to navigate. There are a number of tools and resources that authorities at different levels can employ to help citizens navigate these hurdles.

i. Guidance and other technical and informational support

Guidance can be useful for all actors involved with community power. First, national level guidance can be useful for local governments and other stakeholders. In England, the Department for Communities and Local Government (DCLG) has issued guidance on how local authorities should go about backing local communities in renewable energy development. Specifically, it establishes considerations that local development plans should take into account when looking at the local potential for renewable energy generation.

On the other hand, local governments can also develop guidance for citizens and community organisations and enterprises in order to make local legal frameworks easier to navigate.

Germany

Empowering citizen-owned solar: The city of Freiburg, Germany

Freiburg, Germany, provides a good look at how cities can provide informational support for community power. The local authority has been a strong promoter of solar PV and thermal development on public – particularly schools – and other buildings. In order to facilitate participation by local citizens, the city has made information available on particular administrative procedures, and applicable regulations. Specifically, the city designed an internet-based tool called 'FREE SUN', which identifies available roof space for solar installations. Through this tool, home owners and citizen groups have access to free information about whether certain building structures are suitable for the installation of solar equipment, and if so, how to realise a project. This information and guidance has been vital towards promoting the massive uptake of solar PV and thermal throughout the city.

It may be useful to provide broader informational and technical support to community groups or local authorities as part of a more comprehensive information dissemination strategy to build local capacity. For example, in Scotland the government has developed a comprehensive 'Community Energy Toolkit',[104] which provides a broad range of information for community groups that are interested in starting a community energy project. It consists of information on the basis of renewable energy, different technologies, ownership models, organisation, and other energy issues such as energy efficiency. Direct governmental informational and technical support can also help individual citizens and community groups navigate regulatory and other hurdles that exist in setting up community power projects. In Germany, this function is usually provided by the city, or through the municipal energy company. In Denmark, support for local/municipal renewables development has been conducted through the Energy Service Denmark *(Energitjenesten).* Run by citizen-based organisations, there are many offices spread throughout the county, which promote awareness of renewable energy and energy efficiency, and provide hands-on assistance to citizens and groups that want to establish community power projects.

[104] *See* the Scottish Government (2011). Community Renewable Energy Toolkit. Available at http://www.scotland.gov.uk/Publications/2009/03/20155542/0.

Denmark

Local support for community power: Ærø Energy and Environment Office, Ærø, Denmark

Ærø Energy and Environment Office, which started as a local association in 1982 to promote renewable energy and sustainable ways of living, shows how governments can help support development of citizen-owned renewable energy. It began as an informal group of citizens from the Island of Ærø that wanted to talk about the feasibility of introducing renewable energy on the island. They helped to spearhead the first wind project on Ærø. Since then it has grown and now engages in a number of activities, including:

- Initiating and administrating renewable energy projects;
- Providing free and independent information and guidance on energy conservation and use of renewable energy;
- Arranging public debates;
- Education activities;
- Guided tours to renewable energy installations;
- Engaging in cooperation with local companies, NGOs, municipalities and energy supply companies.

ii. Financial resources

The next chapter is dedicated to existing best practice on providing financial incentives and support to community power. However, it is worth mentioning that community power projects can be supported by both regional and local level funding arrangements. In Freiburg, Germany, under its Climate Protection Strategy the city decided to use 10% of the funds it obtains from its concession levy for the use of the electricity grid (approximately €1.2 million per annum) to implement specific measures, particularly energy efficiency, retrofitting and infrastructure improvements, with the city also making provision for another €2 million.[105] It must be recognised however, that not all municipalities are in a position to provide a great amount of financial support to community power. Local funding arrangements should be supplemented by other funding arrangements, for instance at national or EU level, and be coordinated in order to ensure efficiency.

[105] Freiburg Im Breisgau (2010). *Environment Policy in Freiburg,* p 28. *See* also Local Governments for Sustainability (ICLEI) (2009). "Freiburg im Breisgau, Germany: Long-term Strategies for Climate Protection in Green City Freiburg," *ICLEI Case Studies, number 104,* p 8.

Optimising Financial Support Schemes

3

In order to help renewable technologies penetrate the market, which until now has heavily supported fossil fuels, governments must use a number of different measures to support its deployment. The need for such measures is reflected in Directive 2009/28/EC (the Renewables Directive), whereby "public support is necessary ... as long as electricity prices in the internal market do not reflect the full environmental and social costs and benefits of the energy sources used."[106]

Support for community power through the use of financial incentives can be pursed through a number of measures. Under the Renewables Directive, support schemes are defined as:

> *Any instrument, scheme or mechanism ... that promotes the use of energy from renewable sources by reducing the cost of that energy, increasing the price at which it can be sold, or increasing, by means of a renewable energy obligation or otherwise, the volume of such energy purchased. This includes, but is not restricted to, investment aid, tax exemptions or reductions, tax refunds, renewable energy obligation support schemes including those using green certificates, and direct price support schemes including feed-in tariffs and premium payments.*[107]

Some of these forms of support are more appropriate for community power than others. The following are highlighted below:

1. Different price and/or purchase support schemes for community power;
2. Various forms of tax relief for investment in community power; and
3. Grants, loans and other government support that has been used to support community power projects.

[106] Renewables Directive, *above* note 77 at recital 27.
[107] Renewables Directive, article 2(k).

The first category above focuses on 'operating' support (support per kWh) for renewable energy production, while the latter two categories focus on 'investment' support. Within these categories governments have a number of options to choose from, depending on their priorities and circumstances. In fact, many countries have chosen to adopt support schemes that contain elements of different options, some of which will be dealt with below.

When developing national support schemes for renewable energy, certain restrictions must be recognised, particularly around 'State aid'. Under Article 107(1) of the Treaty on the Functioning of the EU, State aid is in principle prohibited as being incompatible with the internal market. However, on the basis of Articles 107(3) of the Treaty, certain aid for renewable energy may be compatible with the internal market. Reflecting the Commission's desire to harmonise national support schemes towards a market-based approach, and to ultimately end subsidies for renewal energy, it has just finalised new *'Guidelines on State Aid for Environmental Protection and Energy'*,[108] which places a number of restrictions on how Member States will be able to provide support for renewable energy in the future.

3.1 Supporting Community Power Projects to Produce and Export Renewable Energy

Member States use a number of methods to pay generators and exporters of electricity from renewable energy sources. Some support schemes introduce more stability for investors through guaranteed returns and easy administration, while others are more complicated and encourage higher competition between generators. In general, support schemes that exemplify the latter tend to benefit larger operators and incumbent market participants, while schemes based on guaranteed returns and simplicity generally favour community power projects. An important aspect of successful support schemes, regardless of which is used, has been the ability to adjust to changing market conditions while maintaining certainty for investment.

3.1.1 Feed-in tariffs and feed-in premiums

The most direct and simple method of providing support for renewable energy is through a feed-in tariff (FiT), which guarantees a price for electricity that is generated and/or delivered to the grid. Generally, there are two types of FiT: 1) a fixed-price FiT, where the government establishes a fixed price for each kWh that is produced by an eligible installation; and 2) a feed-in premium, which guarantees that eligible installations will receive a premium price for each kWh that is produced, in addition to the market price. Regardless of form, FiTs are key sources of income for community energy projects.

For simplicity of administration and investor certainty, a fixed-price FiT is the preferred option, and that model has been dominant. Such systems are trusted and understood by community power projects. Fixed-price FiTs are easier to participate compared to feed-in premium schemes, which have higher transactional costs and provide less certainty.[109] Eligibility for a guaranteed FiT price is often also a material consideration for obtaining a loan, where otherwise it can be hard for community power projects to access private finance.

Germany's massive growth in renewable energy production can largely be attributed to its robust FiT scheme. The support scheme's legal basis is the Renewable Energy Act (*Erneuerbare-Energien-Gesetz* – EEG),[110] which covers the electricity market. In particular, its key principles include:

- **Investment security.** Access to the grid is guaranteed by the regulatory framework so that every kWh that is produced from renewable energy sources has to be purchased. The price is stable and guaranteed normally for 20 years depending on the technology.
- **Decreasing support.** Regular decreases in support in order to encourage producers to continuously innovate towards more advanced and cost-efficient technologies.
- **No burden for the state budget.** The support scheme is financed through a surcharge *(EEG-Umlage)* on electricity bills for every kWh consumed. It is based on the 'polluter pays' principle, as the more energy consumed the

[108] European Commission (2014). Communication from the *Commission: Guidelines on State aid for environmental protection and energy 2014-2020,* SWD(2014) 139.
[109] *See* Jacobs, D (2009). "Framework Conditions and International Best Practices for Energy Support Mechanisms" Paper drafted within the framework of the seminar on International Best Practices for the Legal and Regulatory Framework of Renewable Energy, Baku, Azerbaijan, 14-18 December 2009, p 11.
[110] Although this support scheme is based on the Renewables Directive, mandatory elements resulting from the Directive will not be excluded, but rather the functioning of the whole system will be presented and it bases on: Ziller, U and Kirrmann S (Agentur fuer Erneuerbare Energien e.V.) "10 Jahre Erneuerbare-Energien-Gesetz", Berlin 2010. Available: http://www.unendlich-viel-energie.de/media/file/135.27_Renews_Spezial_10_Jahre_EEG_maerz10_online.pdf.

higher the bill, although several exemptions have been granted to energy intensive companies. It also creates transparency, as costs of subsidising renewable energy are visible (which is not the case for fossil fuels).

The German government has committed to redesigning the *EEG-Umlage* by 2017 to reflect a more market-based approach. This shift is in response mostly to perceived costs to consumers and market distortions in the EU's internal energy market, which led to an EU Commission investigation over whether industry exemptions from the *EEG-Umlage* violate EU State aid rules.

This should not be seen as a failure of the EEG, or a criticism of FiTs. The European Commission's studies have shown that in practice "[FiTs] achieve greater renewable energy penetration, and do so at lower costs for consumers."[111] This is particularly the case where FiT systems are well-adapted such as Germany's. There, FiTs have succeeded in creating significant penetration and increasing the cost efficiency of more established renewable energy technologies to the point where they are better able to compete in a more market-based framework. The question moving forward, particularly in Germany, will be 'who' in fact pays for the energy transition. Under the government's new proposals, many energy intensive firms are still exempt from the *EEG-Umlage*, unfortunately pushing costs towards other members of society.

United Kingdom

Feed-in Tariffs for Community Energy Projects in the UK

In the UK, renewable energy projects with a generation capacity of less than 5 MW of a qualifying technology are currently eligible to receive FiT payments. Although this applies to all projects under 5 MW regardless of whether electricity is intended for self-consumption or export, the majority of community power projects in the UK fall within this category. For projects under 50 kW, support is conditional on equipment and installation that is covered under the UK's Micro-generation Certification Scheme. This support scheme is the latest evolution of a national renewables support scheme that was first based on competitive bidding through auctioning, then subsequently on a purchase requirement called the Renewables Obligation (RO).

At the end of 2013 the Energy Act was passed, which provides the Secretary of State with authority to increase the maximum capacity for community projects eligible for FiT payments from 5 MW to 10 MW.[112] This was in response to calls from community energy participants, who recognise that the 5 MW limit creates a perverse incentive to keep community energy projects small. As part of its 'Community Energy Strategy', DECC will consult with community energy groups on whether this power should be exercised. If it decides to do so, it would continue to ensure provision of reliable revenue streams for smaller community energy projects, even while the UK heads towards a market-based support system for renewable energy over the long-term. Nevertheless, recent changes to the Guidelines on State aid for Environmental Protection and Energy, explained below, are likely to complicate efforts to expand FiTs for community power.

[111] European Commission (2008). *The Support of Electricity from Renewble Energy Sources. Accompanying document to the Proposal for a Directive of the European Parliament and of the Council on the Promotion of the Use of Energy from Renewable Sources,* COM(2008) 19, p 8.

[112] Energy Act 2013, c.32, section 146. Available at http://www.legislation.gov.uk/ukpga/2013/32/contents

Several leading countries in renewable energy development have adopted a feed-in premium model. Denmark, which was the first country to adopt a FiT, opted for a feed-in premium scheme after a failed attempt to institute a model based on tradable green certificates (TGCs). The current system is a combination of: 1) fixed premium subsidy price added to the market price; and 2) a fixed feed-in tariff for electricity.[113] The prices paid under a premium are capped to contain costs, which depends on the date the installation was connected to the grid. Supplemental prices depend on the content of political agreements and the technology. There is also a purchase obligation in Denmark, which is a common trait of FiT and feed-in premium national support schemes.

Before it deconstructed its own remuneration scheme for renewables, Spain offered producers a choice between receiving a FiT and a feed-in premium model in order to promote cost efficiency and flexibility according to market conditions for electricity.

3.1.2 Quantity-based market support systems

There are a number of quantity-based market support systems that are used to support renewable energy. First, 'quota' mechanisms require market actors (such as power producers, suppliers or consumers) to meet a portion of their supply or demand from renewable sources of energy, as specified by law.[114] For instance, suppliers may be required to provide a certain share of the electricity they provide to their customers from renewables. The obligated party can purchase renewable electricity directly, in which case it receives TGCs. Alternatively, it may purchase TGCs on the market, or pay a penalty.

Competition for support may also be pursued through 'auctioning', or 'tendering'. Under this system, independent producers compete with each other for support based on who can produce energy at the lowest cost.

Proponents of quantity-based market systems say they are more flexible and cost-efficient in comparison to other support schemes, arguing that they drive innovation and bring down prices through market forces. However, in practice FiTs have achieved greater renewable energy penetration, and at lower cost for consumers.[115] Quantity-based market systems also entail more investor risk and volatility, and many problems have been experienced under these systems. In particular, TGC and tendering schemes tend to favour large players, preventing smaller producers such as community energy projects from entering the market.[116] In the UK, competitive bidding through auctions was the first type of national support scheme for renewable energy. However, bids ended up being too low and many projects were never constructed. Because this was a process designed for large developers, it excluded participation from smaller projects. This led to a backlash against wind energy early on, which still persists today.[117] Support schemes that currently use tendering processes are more appropriate in the context of very large projects such as large offshore, which is the case in Denmark.

3.1.3 The future of national support for community power – the new State aid guidelines

The European Commission recently finished revising its State aid guidelines, which significantly affects how Member States can support future community power projects that produce electricity from renewable energy sources.[118] In particular, from 1 January 2016, only projects with a capacity of less than 500 kW, and wind projects with a capacity of 3 MW or 3 generation units will be eligible to receive fixed-price FiTs.[119] Otherwise, support will need to be granted as a premium. This means that only smaller community power projects will be able to receive fixed-priced FiTs, while larger projects will be required to participate in a feed-in premium system.

From 1 January 2017, the Commission wants Member States to transition towards a competitive bidding process open to all generators based on non-discrimination and technology neutrality.[120] However, there is an exception for installations with a capacity of less than 1 MW, and for wind installations with a capacity of up to 6 MW or 6 generation units.[121] Furthermore, Member States may not be required to establish competitive bidding processes if they can demonstrate that:

[113] Margrethe Basse, E (2013), *above* note 5 at p 38.
[114] Baron, R (2013). "Renewable Energy: a Route to Decarbonisation in Peril?"preared for the 29th Round Table on Sustainable Development held at OECD Headquaqrters, Paris 4-5 June 2013, p 24.
[115] European Commission (2008), *above* note 111 at p 8.
[116] Jacobs, D (2009), *above* note 109 at p 7.
[117] Lauber, V (2011). "The European Experience with Renewable Energy Support Schemes and Their Adoption: Potential Lessons for Other Countries," *Renewable Energy Law and Policy Review* Vol 2, pp 120-121, at p 122.
[118] Aid for renewable heat is also covered under the State aid guidelines, but under separate criteria.
[119] State aid guidelines, para 125.
[120] State aid guidelines, para 127.
[121] State aid guidelines, para 128.

1. Only one or a very limited number of projects or sites could be eligible; or
2. A competitive bidding process would lead to higher support levels; or
3. A competitive bidding process would result in low realisation rates.

Furthermore, if Member States can prove that taking a technology neutral approach "would lead to a suboptimal result that cannot be addressed in the process design," they may be exempt from this requirement.[122]

The argument could be made that there is considerable room for Member States to maintain a number of different options to support community power under the new Guidelines. In particular, smaller community power projects should still be eligible for fixed-priced FiTs until the end of 2016. In addition, as long as one of the above conditions can be demonstrated, Member States can maintain some type of FiT scheme. Therefore, as long as political will exists Member States should have the scope to provide tailored support for community energy projects. Member States should use their discretion to prioritise support for community power in a way that maintains investor certainty and is adaptable to market conditions to avoid distortions, and ensures sustainability over time. Alternatively, where Member States elect to construct competitive base tendering or auctioning, safeguards should be in place to ensure community power can participate. For instance, there should be relevant criteria related to community leadership, participation and engagement.

3.1.4 Net metering – supporting self-sufficiency schemes

Many Member States are rethinking their support schemes due to austerity, perceived high costs, and pressure from the EU Commission to move towards more competitive-based support. Nevertheless, other options exist. For small installations, such as on-site solar and micro-wind, net metering may provide an alternative set of incentives related to self-sufficiency. By using a special device and pricing calculation (which can vary), net metering systems are designed to run backwards when the installation is producing energy.[123] This method allows the consumer – also the owner and producer – to use the onsite installation to offset their consumption from the public grid. The incentives include guaranteed long-term savings on electricity bills (helping to combat fuel poverty), and where allowed, potentially a small income stream if their net export to the grid is greater than their overall consumption. Net metering can also allow individual citizens and small businesses to own their own installation, contributing towards self-sufficiency, greater consciousness of energy usage, and local grid stability.

Denmark used yearly net metering to increase the uptake of solar technologies. This was incredibly successful, with an increase from 17.5 MW of installed capacity PV in 2011 to 482 MW at the end of 2013.[124] Instead of receiving feed-in payments, eligible installations were exempt from the national Public Service Obligation (PSO) tariff, which is a charge to every consumer based on their level of consumption. Solar installations up to 50 kW, wind energy installations up to 25 kW, and other technologies up to 11 kW are eligible for complete exemption of the PSO tariff, while solar installations over those thresholds are exempt from the portion of the PSO that covers support for renewable energy.[125] In order to be eligible, installations must be connected to the grid, entered into a public register, installed at the place of consumption, and fully owned by the consumer.[126] This incentive has helped private energy consumers save on electricity bills, which are some of the highest in Europe.

It is interesting to note that the scheme's success also resulted in a sharp decrease in the amount that consumers had to pay under the PSO tariff, along with energy taxes and VAT. Therefore, the government is in the process of modifying incentives under the scheme. The government is replacing yearly net metering with 'hourly' net metering for new residential and communally owned installations. Under hourly net metering, self-production offsets consumption costs only during hours in which they both occur. Otherwise, the installation receives a FiT, and the consumer then purchases electricity back under normal market conditions. Municipalities will also qualify for hourly net metering, although eligibility will be limited to a nation-wide cap of 20 MW. This case demonstrates that when constructing net metering schemes it is important to assess potential impacts that resulting subsidies will have on overarching financial support for electricity systems and public finances.

[122] State aid guidelines, para 127.
[123] Poullikkas, A, Kourtis, G and Hadjipaschalis, I (2013). "A Review of Net Metering Mechanism for Electricity Renewable Energy Sources," *International Journal of Energy and Environment* Vol 4(6), pp 975 – 1002.
[124] *See* Gipe, P (2013). Time to Break Free of Net-Metering; We Need a 'FIT' Policy for Renewable Energy to Soar, *National Geographic.com* (December 2013). Available at http://energyblog.nationalgeographic.com/2013/12/26/break-free-net-metering/, and Gerdes, J Denmark Moves to Cool its Red-Hot Solar Energy Market, *Forbes* (November 2012). Available at http://www.forbes.com/sites/justingerdes/2012/11/30/denmark-moves-to-cool-its-red-hot-solar-energy-market/.
[125] Regulation on Net Metering (BEK 1032/2013), sections 4(2) and 3(2). *See* also Pobłocka, A (2013). "Electricity Promotion in Denmark," RES Legal (as of 25 October 2013). Available at http://176.9.160.135/search-by-country/denmark/.
[126] BEK 1032/2013, sections 3 and 6.

3.2 Support for Investment in Community Power

Operational support is much more important for the competitiveness of renewable energy production than investment support.[127] However, the latter is still very important in incentivising changes in investment behaviour, and lowering the cost of emerging technologies. As such, successful operational support schemes have usually been supplemented by tax-based incentives and lending support, for example through grants or loan guarantees. While a number of schemes encourage investment in renewable energy, several schemes have been directed towards incentivising more socially responsible investment, such as community power projects.

3.2.1 Special tax treatment for social and community-oriented investments

In the UK, socially responsible investment has been recognised as an effective way of supporting communities, solving social problems, and contributing to economic growth. To encourage such investment with respect to renewable energy, members of eligible social enterprises may be entitled to tax breaks under the Seed Enterprise Investment Scheme (SEIS) and the Enterprise Investment Scheme (EIS). Under this scheme, tax payers may offset 50% or 30% respectively of their investment against their personal tax liability. There are restrictions on eligibility for SEIS and EIS, and generally where entities benefit from FiT payments, their investors are disqualified from this tax relief. However, social enterprises (such as Industrial Provident Societies (IPSs) and Community Interest Companies (CICs)) are currently allowed to receive FiTs and raise investment under SEIS and EIS. This has been used to entice more socially-minded investors, and creates a special incentive for individuals that are interested in investing in community power projects that are aimed at benefiting the community, as well as generating individual profit.

United Kingdom

Promoting community benefit through beneficial tax incentives: Dingwall Co-operative, Scotland, UK

Dingwall Wind Co-operative demonstrates how local social investment can go hand in hand with promoting wider community benefit. Formed as an IPS between a farm owner, members of the local community, and the local community trust, the co-operative aims to fully own and operate a 250kW turbine. The entire costs required for the project (£856,000) were raised through a share offer. Members of the public invested between a minimum of 250 and a maximum of 20,000 shares, 85% of which were sold within a 10 mile radius of Dingwall. In addition to an estimated 7.5% return on investment for members, the project has received advanced assurance that the first £150,000 invested is eligible to benefit from the SEIS tax relief scheme and the remainder of the investment (up to £5 million) is eligible to benefit from EIS. It is estimated that around £8,000 per year in revenue will be paid into the community trust, which will then offer grant schemes to local organisations.

In Denmark, community foundations are subject to Business Tax Settlement Rules, which treats ownership in renewable energy projects as a commercial investment. However community funds, being foundations, pay out a portion of their profits through grants to finance purposes that are established in its bylaws.[128] While the fund pays tax on the profits before the grants are made, they can subsequently make tax deductions based on the grants that are made.

[127] European Commission (2008), *above* note 111 at p 4.
[128] Pozzi, L *et al* (2013), *above* note 34 at p 42.

3.2.2 Different tax rules for smaller investments

There may also be special tax rules for smaller investments in community power projects, which can promote participation from individuals and households with less money to invest. For instance, Denmark operates a tax system that employs Schematic Settlements and special Business Tax Settlement rules. This system differentiates how income made from investments in renewable energy projects is taxed based on the amount of the investment and the type of project.

Turbine owners associations employ both tax schemes. Under schematic settlement, the investment is seen as a private non-deductable investment, where if annual income amounts to less than DKK 7,000, it is tax free.[129] After DKK 7,000, 60% of the revenue is added to personal income. Under a business tax settlement, shares are considered as a commercial investment, whereby all revenues are taxable with deductions for running costs, connection fees and write-offs. Under this model, a capital income tax of 37% is applied.[130]

3.2.3 Tax relief for construction of community installations

Governments can also offer citizens tax relief related to upfront costs associated with investment in community power. In the UK, the government provides businesses with up-front tax relief on capital investments in designated energy-saving plant and machinery. All businesses – regardless of size, sector or location – that pay UK corporation or income tax are eligible for the scheme. This allows businesses to write off the full cost of the investment against taxable profits within the first year of operation. Since it was established in 2001, this tax relief is typically supported investment in renewable heating projects.

Municipalities in Spain have provided similar tax relief on a local scale. On the Island of Mallorca, the "Balearic Government" provides subsidies for investments in installations for 'auto-consumption' (e.g. schools and local businesses). Municipalities on the island have also helped promote auto-consumption through local tax ordinances.

Spain

Local tax provisions to promote self-consumption: The Municipality of Calvia, Mallorca, Spain

The Municipality of Calvia provides a good example of municipalities embracing community power as a way to ensure environmental and economic sustainability. The municipality, which is heavily dependent on tourism, meets most of its energy needs through imported oil and gas. In an effort to become more independent, and to pursue 'sustainable tourism', the town has signed the Covenant of Mayors (COM), and has enacted several measures to promote local renewable energy. In addition to committing to using solar to generate electricity for public buildings, within its urban plan, the municipality enacted special ordinance on taxes that are assessed relating to construction, installation and works. Under the ordinance, taxes applied to construction, installation and works to incorporate thermal or electrical solar installations for self-consumption are eligible for a 95% tax credit.[131] This incentive has benefited both households and local hotel operators. With the success of these and other measures, the municipality is now focusing on larger goals, including energy efficiency and savings.

3.2.4 Grant/loan schemes for preliminary investigations and works

Upfront investment costs have been identified as a significant barrier for community projects. Before construction, community groups must fund pre-planning and planning work, including feasibility studies and permits, and legal agreements. Without support, these costs are often prohibitive. As this problem gains in recognition, governments are providing financial support for upfront expenditures.

[129] *Ibid.* at p 37.
[130] *Ibid.*
[131] *See* Ajuntament de Calvià, Mallorca, Ordenanza reguladora del impuesto sobre construcciones y obras. Available at http://www.calvia.com/servlet/model.web.ShowDoc?KARXIU=87&TABLENAME=WEB.DOCUMENTACIO&pageProcessKey=LOADINGDOCUMENT&KDOCUMENTACIO=16585.

In the UK, a number of funds have been established, all with the aim of supporting community power projects. Perhaps the most successful of these, the Community and Renewable Energy Scheme (CARES), was established by the Scottish government in 2011. It is designed to provide free advice (including legal) to community groups, a number of helpful resources, and grants and loans for specific preliminary works. In 2010, the Welsh government established Ynni'r Fro with funding obtained through the European Regional Development Fund (Structural Funds) to support community energy. It provides advice and support, including grants up to £300,000 and loans of up to £250,000, for community power projects. In 2013, England launched a £15 million Rural Communities Energy Fund, which provides grants to eligible community groups to undertake feasibility studies, and loans for planning applications for renewable electricity and heating projects. In early 2014, the UK government followed up by launching an additional £10 million Urban Community Energy Fund.

It should be noted that this support is often not enough to fully cover preliminary costs for community power projects. Furthermore, governments may impose complicated hurdles through eligibility requirements, as England's Rural Communities Energy Fund did when it made it harder for groups that had obtained funding under the scheme to receive FiT payments. Nevertheless, this support has also been seen by community groups as vital in the first steps. In addition to making such funding available, there should be clarity on how these schemes work with other forms of support so that community groups can adequately assess their options.

3.2.5 Guarantees and other credit support from national and local governments

In some countries, renewable energy projects are seen as high risk investments. Therefore, it can be difficult for smaller or less experienced community groups to access finance. However, in countries where renewable energy is relatively well developed, governments have usually provided support to create a more stable and secure lending environment.

In Denmark, the 2008 Promotion of Renewables Act the government also established a scheme to provide guarantees up to DKK 500,000 (approximately €67,000) for exploratory activities for potential renewable energy projects. For a project to qualify it must contain at least 10 members. Additionally, a majority of the members must either be residents of the municipality, or live within 4.5 km from where the installation will be constructed. If the project is deemed viable, then the grant turns into a loan.

At the local level in Denmark, there is also a specific framework for how local governments are to carry out long-term investments. If a municipality needs to take out loans to invest in renewable energy, it must do so according to rules established by the Act on KommuneKredit.[132] The Act allows the provision of loans to municipalities at a rate of 2.37% over 20 years. Lending terms are subject to strict regulations and government oversight, which can limit the ability of municipalities to take out loans for community power projects. Nevertheless, KommuneKredit is also available to entities that are guaranteed directly or indirectly by local governments and has been used in this way to support non-profit community power projects. This guarantee used to be provided for free; however, the law was revised to require some type of payment for the guarantee, in order to comply with EU State aid rules. While this has decreased the direct benefit of receiving guarantees it still helps to contribute towards a more secure lending environment for community power projects.

[132] Act No. 383 of 3 May 2006 Act on the Credit Institution for Local and Regional Authorities in Denmark. Available at http://kommunekredit.com/About-KommuneKredit/Act-on-KommuneKredit.aspx.

Denmark

Investor confidence supports community power: Aerovind 4, Ærø, Denmark

In general, local banks in Denmark have been willing to lend to renewable energy projects. In one instance, when local citizens on the island of Ærø planned one of their latest projects (Aerovind 4), Landbobank, a lending institution, required only an overall 10% down payment, which equalled 300 DKK for each shareholder in the wind project which consists of 3 turbines each with a capacity of 2 MW. The only guarantee required was the shares in the wind project themselves. Until the loan is paid off, a portion of the profits that are obtained through feed-in premiums will go towards paying back the loan.

Germany also has a long history of leveraging private finance for community projects through public support. In addition to FiTs, renewable energy projects can access low interest loans from Germany's State-owned development bank, *Kreditanstalt für Wiederaufbau* (KfW). For renewable heating installations, KfW provides favourable interest rate loans (particularly for smaller enterprises), grace periods for repayment to account for the start-up phase, and repayment subsidies.[133] Small grants have also been made available for micro-generation installations – particularly solar – on domestic, commercial and public buildings.[134] Combined with a guaranteed FiT, this lending and small grants support has resulted in successful uptake of solar by individual citizens and community groups. These various measures have contributed towards local investor confidence in different types of community power projects.

3.3 Support for Community Heating and Cooling

Support schemes for renewable heating do exist in many countries, although some are more advanced than others. These usually combine a mix of limited production support with additional tax incentives. In the UK, district heating is eligible for support under its Renewable Heat Incentive (RHI). The RHI was established pursuant to Section 100 of the Energy Act 2008 in order to support heating and cooling produced from renewables. Similar to FiTs for renewable electricity production, the RHI provides a payment per unit (kWh) of renewable heat produced. The scheme differentiates between domestic and non-domestic installations, the latter including district heating and other large public buildings. This means both citizens and community groups can benefit from the RHI.

To support investment, the UK government also recently established a Heat Network Delivery Unit (HNDU) to catalyse heat networks of all sizes, providing expertise and £6.9 million of project funding to support local authorities in the early stages of development. The HNDU aims to help a range of heat network projects through to a stage where they can attract private investment.[135] In Germany, to promote investor confidence KfW also provided loan support for extending district heating grids that use renewable sources of heat, with additional support for those that use combined heat and power.[136]

In Denmark, renewable heating receives little production support, coming in the form of tax exemptions. This stems from the fact that instead of being liberalised, the market for heating supply is based on a 'full-cost recovery' principle and limited competition. Therefore, the scope for additional subsidies is quite limited. Nevertheless, combined heat and power (CHP) plants using biomass may be able to receive slight production subsidies. Furthermore, to incentivise investment in renewable heat technologies, investment grants and subsidies for the extension of existing installations with eligible technologies is provided. Notably, in most instances support is only available to private individuals, self-employed professionals, small and medium-sized enterprises, municipalities, and non-profit organisations. As such, this type of support may be generally suitable for community-led projects.

[133] Hacrow Group Ltd (2008). "Appendix A – International Case Studies – Germany," in *Review of Energy Efficiency and Microgeneration Support in Scotland*. Prepared for the Scottish Government (March 2008).
[134] *Ibid.*
[135] Department of Energy and Climate Change (DECC) (2014). Community Energy Strategy, p 71.
[136] Hacrow Group Ltd (2008), *above* note 133.

Integrating Community Power into Planning Frameworks and Simplified Permitting Procedures

4

One of the biggest obstacles to the realisation of community power projects is getting the project approved at the local level. This includes obtaining various land use, development, environmental and safety permits. The procedures involved are often numerous, complex, time consuming, and costly to navigate. However, community power projects, particularly micro-installations, are often smaller than commercial developments, and dependent on volunteers with minimal resources. To support community power, therefore, it may be appropriate to reduce regulatory burdens where appropriate.

There are very different procedures in place in the different countries studied. However, certain elements are common to all systems. In general terms, each system has a strategic and spatial planning framework developed at varying levels of government, procedures for assessing the environmental impact of developments, and mandatory public participation in decision making. Providing community power with specific consideration in these different frameworks can assist communities in ensuring projects get approved and burdens are minimised.

This chapter provides best practice examples of how regulatory burdens can be reduced, and how certainty can be increased for community energy projects. This includes: national planning policy and spatial planning frameworks; individual permitting; and obtaining necessary licenses. It then discusses the procedures in place to provide for citizen engagement in the permitting process.

4.1 Integrating Community Power into Spatial Planning Frameworks

Spatial planning is the process by which high level decisions are made about the amount, type and distribution of development within the specified area. Its primary role is to enhance integration between sectors and to improve national and local systems of urban and rural development while taking into account environmental considerations.[137]

Spatial planning is important in the permitting process for community power as these frameworks form the basis on which all land use permitting decisions are based. Inclusion of explicit support for community energy within spatial planning frameworks can create an assumption in favour of consent. This may reduce the amount of evidence needed for individual projects, and consequently the resources that will need to be dedicated to producing the application.

In general, spatial planning can be carried out at regional, local and neighbourhood level. It is important that plans are prepared in a coordinated way to ensure consistency and cohesion between different levels of government. This is important in terms of encouraging community power projects and maximising public participation and transparency. The considerations that are prioritised at these levels will be different, and each can have implications for community power. These implications are discussed below.

4.1.1 Support for community power in national planning policy

Strong support for community energy in national level planning documents can help provide confidence at lower levels of government involved in the planning system, and assist community groups when facing reluctant decision makers. It can act as a basis on which to ground arguments about the necessity for community power and encourage positive decisions at a local level.

In the UK the responsibility for planning policy lies with the devolved administrations of Scotland, Wales and Northern Ireland with the UK government creating the policy for England. While not technically 'nations' these four territories are described in a UK constitutional context as 'countries', therefore in this policy area we refer to the policies of each devolved administration as 'national' policy.

In Scotland, the national planning policy explicitly calls for community renewable energy projects to be supported at the local level. England and Wales have similar, although slightly weaker policies.

> *Scottish Planning Policy – "There is potential for communities and small businesses in urban and rural areas to invest in ownership of renewable energy projects or to develop their own projects for local benefit. Planning authorities should support communities and small businesses in developing such initiatives."*

This high level support is important for ensuring lower level frameworks support community energy. However, such statements are generally vague and imprecise. National planning policy should thus include language for mandatory support for community energy at lower levels of government.

4.1.2 Regional planning frameworks

Regional planning frameworks are plans developed at a sub-national but larger than local level. Not all countries have a regional level of governance. However, where this does exist it is generally designed to ensure cohesion of decision making between local level governments and create a framework to help realise national policies in a specific regional context.

In Germany, a federal republic, many of the individual states *(Bundesländer)* has set up its own planning framework to promote renewable technologies, such as wind. In North Rhine-Westphalia, for instance, a Wind Energy Decree laid down planning aspects and building and pollution control laws for installing wind turbines.[138] This includes the identification of priority zones in regional plans, including exclusionary zones for nature conservation and maintenance. Such zones are transparent, and accessible on the internet.[139] It also includes guidance on repowering, and recommendations for the review of height restrictions and statements on safety distances for wind turbines in relation to residential housing. Criteria include avoiding noise nuisance, minimum distances from residential areas, major interventions in the landscape, and species protection, and pollution control procedures.[140]

[137] *See* United Nations Economic Commission for Europe (UNECE) (2008). *Spatial Planning: Key Instrument for Development and Effective Governance.* ECE/HBP/146 (United Nations: Geneva).
[138] Decree for the planning and approval of wind turbines and directions for the objectives and use (Wind Energy Decree) July 2011. Available at http://www.energiedialog.nrw.de/wp-content/uploads/2011/07/WindenergieErlass11-07-2011-FINAL.pdf.
[139] *See* Lang, M and Mutschler, U (2011). "NRW Enacts New Wind Power Decree," *German Energy Blog* (12 July 2011). Available at http://www.germanenergyblog.de/?p=6779.
[140] *Ibid.*

Many *Bundesländer* have established planning laws that require planning authorities to designate priority zones for renewables, even requiring a certain percentage of land (usually 2%) to be made available for development. Wind Energy Decrees also establish guidance for authorities, municipalities, investors and citizens regarding relevant provisions on planning and construction of wind turbines.

One drawback, however, is that when these plans are drawn up many of the 'good areas', particularly for wind, can be quickly placed under concession agreements between larger developers and landowners. This has had the effect of shutting out community power projects. Furthermore, it can unintentionally create 'lottery' winners out of people that happen to own land where wind can be developed. This has resulted in an uneven increase in land prices, raising the cost of onshore wind development. Furthermore, it has created tensions within communities as commercial developers tend to have the resources to reach landowners earlier and make more attractive offers than community groups. In Denmark, this issue has become a national level debate, although it is unclear whether or how it will be addressed. To help avoid such situations, when designing regional frameworks decision makers should encourage special support for community power projects.

4.1.3 Local planning frameworks

Local planning frameworks are developed at the level where individual projects will ultimately be realised. They are created with more specific requirements of the local area in mind, and are generally quite prescriptive in their designation of specific areas for different types of developments.

In England, some Local Development Plans can be treated as strict zoning plans while others are more policy based. Local Development Plans are required to "support the move to a low carbon future,"[141] although, this is pursued with varying effectiveness. Local authorities are also encouraged to "recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources."[142]

United Kingdom

Making local plans work for communities: Cornwall Local Development Plan, England, UK

The proposed Cornwall Local Development Plan 2010-2030 illustrates how community energy can be integrated into local planning frameworks and given additional support in the planning system that is not available to commercial developers. Cornwall is a county in the South West of England and it enjoys a greater amount of sun than most of the rest of the UK. It has also given rise to a strong community power movement, which has been able to work with and influence local decision making. These efforts have resulted in the local government integrating support for community renewable energy projects in its Local Development Plan. Under 'Policy 15 – Renewable and Low Carbon Energy':

> *"2. Particular support will be given to renewable and low carbon energy generation developments that:*
>
> *a. Are led by, or meet the needs of local communities; and*
>
> *b. Create opportunities for co-location of energy producers with energy users, in particular heat, and facilitate renewable and low carbon energy innovation."*[143]

This policy provides a basis for providing direct local support to community power projects in the area. Furthermore, the nature of the applicant will be taken into account in the planning process and procedures could be tailored to take this into account.

[141] National Planning Policy Framework, section 95. Available at https://www.gov.uk/government/publications/national-planning-policy-framework--2.
[142] National Planning Policy Framework, section 97.
[143] Cornwall Council (2014). *Cornwall Local Plan Strategic Policies – Proposed Submission Document 2010-2030.* Available at http://www.cornwall.gov.uk/media/6532228/Local-Plan-Proposed-Submission.pdf.

In Denmark, spatial planning is carried out at the local (municipal) level and the municipal plan must include guidelines and a framework, and must be accompanied by a statement on the assumptions underlying the local council's proposed plan. Guidelines prepared for designated wind turbine areas must include regulations on the anticipated maximum number, size of and spacing of turbines.[144] This is particularly important, as apart from household and small turbines, wind turbines may only be erected in areas designated through reservations and guidelines in the municipal plan.

In England, in addition to Local Development Plans, there is the opportunity for spatial planning on a much smaller 'neighbourhood' scale.[145] Although a relatively new concept in England, there are examples of neighbourhood planning being used to promote community power.

United Kingdom

For communities, by communities: Strumpshaw Neighbourhood Development Plan, England, UK

Strumpshaw demonstrates how neighbourhood planning can be used to ensure renewable energy is incorporated into the design of developments within the community. Strumpshaw is a small parish in Norfolk, England. Most of the land in the parish is used for agriculture. This built up core is located on the northern slope of the highest hill east of Norwich. Strumpshaw has used its Neighbourhood Development Plan to ensure that a planned community centre should incorporate solar panels into the design and also that it would be desirable for new housing to 'make use of green energy'. [146]

4.1.4 Integrating community power into urban planning requirements

It is becoming increasingly common for municipalities interested in developing local renewable energy production to promote such development through imposing special requirements on future municipal development. Such rules usually require the construction of new buildings and renovation of existing buildings to allow easy installation of solar PV or thermal systems. When applied in an urban setting this can facilitate community power projects on public buildings or on larger buildings such as apartment blocks and industrial facilities.

In Spain, some cities and regions have demonstrated leadership by requiring renewable energy in the construction of all new buildings. In particular, Barcelona has a long tradition of integrating solar and wind generating capacity into municipal planning. In 1999, the city passed the Barcelona Solar Ordinance,[147] which requires that 60% of running hot water in new buildings be provided by solar energy. This regulation applies to buildings intended for residential, health care, sports, commercial and industrial use, and generally any activity involving the existence of dining rooms, kitchens, laundries or other circumstances that lead to a large consumption of hot water. It relates to new buildings and major refurbishment of existing buildings as well as applications for change of use, imposing liability on the building owner, the individuals conducting the work, and the individuals promoting the work. The ordinance relies on the principle of best available technologies, which are dictated by the Mayor from time to time. An application for a building licence or environmental licence must contain provisions setting out how this ordinance is to be complied with. The ordinance was amended in 2006, lowering the threshold of application to include almost all new and rehabilitated buildings in the city.[148]

[144] Danish Energy Agency (2009). *Wind Turbines in Denmark,* p 13. Available at http://www.ens.dk/sites/ens.dk/files/dokumenter/publikationer/downloads/wind_turbines_in_denmark.pdf.
[145] Localism Act 2011, c.20, section 116.
[146] Strumpshaw Parish Council Neighbourhood Plan Submission Version, Annex 2.
[147] Ordenanza Solar Térmica de Barcelona (Ordinance on the Incorporation of Solar Thermal Energy Collection in the Buildings, or OST) of 1999; Anexo sobre Captación Solar Térmica de la Ordenanza General de Medio Ambiente Urbano del Ayuntamiento de Barcelona (BOP Núm 181/Pág. 25-27, con fecha 30/7/1999).
[148] *See* Agencia de Energía de Barcelona, http://www.barcelonaenergia.cat/cas/documentos/documentos3.htm.

Increasingly, local authorities are going even further to integrate community power into local plans through the creation of urban solar maps, or 'cadastres'. Such maps inventory all potential areas in and around the city that are appropriate for installing solar generating capacity. These solar maps can be made public, for instance online, to encourage community solar projects within the mapped area. Furthermore, municipalities can provide additional guidance to groups and individuals that want to develop a project on how to obtain appropriate permissions.

United Kingdom

Facilitating local community ownership: solar mapping in Bristol, England, UK

Bristol, a large city in South West England, has been very progressive in terms of supporting community energy projects. Its solar mapping project is a good example of how local authorities can help community groups and individuals by providing information allowing them to make informed decisions. The city council has produced a map of the whole city showing an estimate from 'limited' to 'very good' potential for solar generation. Residents can enter their postcode to find out if their house is suitable for solar installation, whether planning permission is required, and how to qualify for financial support. There is also more detailed information about estimated system size, electricity generation and CO2 savings. The solar map has also helped facilitate multiple community power projects by at least two co-operatives – Bristol Energy Co-operative, a Community Benefit Society (BenCom), and Bristol Power Co-operative, a Community Interest Company (CIC).

4.1.5 District heating

As highlighted in other sections of this report, district heating is an ideal option for community ownership. In some countries, because of its importance local governments may be required to integrate district heating into local plans. By integrating renewable energy considerations, district heating plans can be a good way to support local community power.

In Denmark, under the Planning Act 2007 and the Heat Supply Act 2005 municipalities are required to include heat planning in their spatial plans.[149] Accordingly, municipalities must review and update these plans every four years. Municipalities must assess whether buildings must be connected to the grid, and can oblige owners of new buildings to connect to the heating network.[150] There is a similar requirement in Germany.[151] This helps to ensure there is enough demand to cover costs associated with supply. In addition, the municipality is responsible for approving new installations and changes to existing installations.

The aim of the Heat Supply Act in Denmark is to promote the most socio-economic and environmentally friendly use of energy for heating buildings and supplying hot water.[152] In practice, this has presented barriers to receiving approval for the integration of renewable heat supply into local networks (it has been clarified that CO2-free sources of heat are secondary to socio-economic sources).[153] Where governments establish heating plans, they should promote a balance between integration of renewable technologies and addressing social concerns, such as fuel poverty.

4.2 Simplified Permitting Procedures for Individual Community Power Projects

The planning and permitting processes for energy schemes are generally technical and complex. It is extremely important for community energy schemes that the complexity of these processes is reduced as far as possible in order to ensure limited resources are put to the best use. Additionally, it is essential that certainty around the results can be provided wherever possible. These factors make it easier to attract investment and support. The process of permitting individual developments takes different forms and the considerations that are taken into account are very important.

4.2.1 Providing clarity throughout the planning process and certainty around the outcome

There are many important considerations in the land-use permitting process for renewable energy projects, which can often be complicated. Such considerations include environmental and

[149] The Planning Act in Denmark Consolidated Act No. 813 of 21 June 2007, section 11b, available at http://www.kulturstyrelsen.dk/fileadmin/user_upload/kulturarv/english/dokumenter/Planning_Act_2007.pdf; Heat Supply Consolidated Act No. 347 of 17 May 2005 with later amendments. *See* also Margrethe Basse, E (2013), *above* note 5 at p40.
[150] Heat Supply Act, section 11.
[151] Schönberger, P (2013), *above* note 52 at p 21.
[152] Heat Supply Act, section 1.
[153] Margrethe Basse, E (2013), *above* note 5 at p 41.

visual impacts of the project, noise and aviation considerations, and siting within protected areas. Often assessment studies will be required, and evidence on the effect of the project will be produced. This can add time, cost and complexity to the permitting process for any project.

The decision on whether an environmental impact assessment (EIA) is needed is a particularly important consideration for community energy projects as it can be costly and time consuming. On the other hand, it is imperative that renewable energy development does not take precedence over other environmental considerations. A balance must be struck between these two sometimes competing objectives.

Under Directive 2011/92/EU (the EIA Directive),[154] Member States have discretion as to when an EIA is required. In the UK, guidance is provided for when an EIA will be required for different size developments, including small-scale wind projects. This guidance also gives an indication of what information is likely to be required in terms of noise, shadow flicker, ecological and other impacts, both when an EIA is required and when one is not. In Denmark, planning is often carried out jointly between the project owners and the municipality. For communities this means that there can be a two-way dialogue to ensure all the necessary environmental impacts are taken into account without additional unnecessary information adding to the burden.

Because of the complicated nature of these processes, there is a need for clear and accessible guidance. This will enable community power projects to be certain of what is required of them. Furthermore, communities need to have certainty as to what the likely outcome will be depending on the results of any assessments. This can be achieved by ensuring that permitting is carried out in a consistent and transparent manner. Authorities can also help community projects by providing free pre-planning discussions, enabling community groups to form a view of the likely outcome without incurring additional upfront cost.

Even with clear guidance and advice from planning authorities, certainty may be undermined by the political nature of local decision making. In Scotland, the government has attempted to make local level planning approval a little less political through a procedure called 'delegated decision making'.[155] This provides planning officers (civil servants) with the power to make certain planning decisions, although there is potential to appeal to a Local Review Board made up of political officials. This is typically done for renewable energy projects under 20 MW,[156] which will almost always cover community power projects. In the rest of the UK, planning decisions are made by politicians with the aid of the planning officer's recommendation. De-politicising the decision-making process also means that the decision maker is less directly accountable to the electorate. This should mean that decisions are predominantly based on the technical aspects of the application and decisions may be more objective than otherwise. There is a potential downside, however, as with less political accountability for decisions it may be more difficult for certain stakeholders to make their voice heard.

4.2.2 Community leadership as a relevant planning consideration

At present, ownership and leadership of a development is not generally considered when assessing an application for planning permission – although community benefit may be. If the fact that a project is led by the community and has the backing of the majority of the community became a material consideration in the planning process, the certainty for wholly community-owned projects would be significantly increased. A material consideration does not mean that permission is guaranteed; however, it lends weight to an application. Combined with other enhancements in the system, this would improve the outlook for community renewable energy projects as well as incentivise commercial developers to fully engage with the community when making an application.

4.2.3 Streamlining for community installations

Directive 2009/28/EC (the Renewables Directive) states that Member States shall:

> *"...ensure that...simplified and less burdensome authorisation procedures, including through simple notification if allowed by the applicable regulatory framework, are established for smaller projects and for decentralised devices for producing energy from renewable sources, where appropriate."*[157]

Examples of this type of streamlined authorisation procedure exist in each country studied but they vary in terms of the procedure adopted and the types of technology they apply to. In general, these streamlined procedures apply to small-scale wind and solar PV installations.

[154] Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive), OJ 2012 L 26 p 1.
[155] Local Government (Scotland) Act 1973 as amended by Planning etc Scotland Act 2006. Available at http://www.legislation.gov.uk/ukpga/1973/65/contents.
[156] A scheme of delegation is made by each local planning authority so the specifics change between different administrative areas.
[157] Renewables Directive, article 13(1)(f).

i. Sliding Scale of Requirements

One of the main ways in which the permitting procedure has been streamlined is by reducing the requirements that need to be fulfilled in order to obtain planning permission depending on the size of the project.

In North Rhine-Westphalia, Germany, there is a 'simplified' procedure for turbines under 50 metres.[158] In Spain, some regions have developed legislation that creates less onerous planning requirements in order to encourage smaller projects. For instance, in 2009 Catalunya passed Decree 147/2009, which relaxes planning requirements for smaller wind farms. Specifically, for wind farms composed of less than five turbines, under 10 MW, and at least 2 km away from existing wind farms, regional authorities have greater discretion whether to require an EIA. It is important to note that under Ley 21/2013, passed at the end of last year, the Spanish government harmonised planning requirements, which include wind. While this is being challenged as unconstitutional, it also distinguishes smaller wind projects. In particular, wind farms with less than 50 turbines, less than 30 MW, and less than 2 km away from other wind farms, are subject to a simplified EIA.

ii. Automatic Permitting

For very small projects there is often a system of assumed consent and no individual application will need to be made. In Germany, regulations differ from state to state. Nevertheless, some states have taken a more relaxed approach towards permitting small renewable energy installations. In North Rhine-Westphalia, for instance, the Wind Decree provides that installations under 10 metres in height that are not located in residential or mixed-utilisation districts are exempt from mandatory approval.[159]

In the UK, there are several General Permitted Development Orders particularly for small-scale wind turbines and solar PV.[160] In many cases these installations will be deemed to have planning permission and therefore will not need to make an individual application to the Local Planning Authority. The specifics of the rules for permitted development vary between the four devolved administrations, but in general these apply outside protected areas and to micro-generation installations. For instance, in England solar PV is pre-approved to be installed on slanted roofs without the need for individual permission. Scotland and Wales go even further, also pre-approving solar to be installed on flat roofs, providing even more flexibility to community projects.

United Kingdom

Making the most of simplified development: Brighton Co-operative, England, UK

Brighton is a good example of how community power can take advantage of simplified planning requirements to maximise community benefit. Brighton Energy Co-operative was formed as a Community Benefit Society (BenCom) in summer 2010. The scheme is about offering an attractive investment opportunity, as well as the creation of environmental and social benefits. With currently around 200 members, the co-operative has invested a total of £655,000 in six solar arrays adding up to 550kW of solar PV in Brighton. It was able to realise these projects without having to submit planning applications, because the solar arrays are mostly on industrial buildings that are covered by Permitted Development Orders.

[158] Wind Energy Decree of 11 July 2011, *above* note 138 at Section 7.
[159] Wind Decree of 11 July 2011, Section 7; Building Code for the state of North Rhine-Westphalia, section 65(2).
[160] These are made by the Secretary of State under the Town and Country Planning Act 1990.

iii. Notification

North Rhine-Westphalia has a regulation whereby the installer must simply notify the competent building authority. In this case the installer is personally liable for complying with any applicable rules.[161] The law applies for already certified models, which have carried out safety tests. In Denmark it is relatively easy to erect PV or small wind turbines (where turbines have a rotor area 1.5 m^2) to houses. It is semi-permitted development, and depending on the circumstances, notification to the council will suffice. If there is no objection by the council, the development may go forward.

4.2.4 Simplifying or streamlining other regulatory and permitting requirements

A number of other permissions or licenses may be required before a community project can be realised. This may include a license to produce power, or considerations for the construction stage the project, which for larger community power projects may include traffic and physical disruptions to the environment, particularly in hydro projects. Simplification and streamlining of these and other requirements can reduce the time and cost for community power projects.

i. Construction/safety

In general, once complete the construction will also need to be certified by a competent authority to verify compliance with conditions and general regulatory compliance. In many cases, this will be an absolute requirement and no streamlined process will be available. However, community projects can be aided by improved guidance being available to provide clarity at an early stage. Pre-certification for construction or safety requirements can also reduce administrative burdens, particularly for micro-generation installations. In the UK, micro-generation developments have to be certified under the micro-generation certification scheme. This is an internationally recognised quality assurance scheme which assesses both products and installers. Denmark also has a system for technical certification of the design, manufacture, installation and maintenance service of wind turbines. This system is administered by the Energy Authority's Secretariat for Wind Turbines. Only certified equipment may be installed in Denmark.

[161] Act to Amend the State Building Code of North Rhine-Westphalia (BauO NRW) – Amendment to Section 56 (1) and (2).

These simplified requirements benefit community projects, as they can chose equipment that has been pre-approved and it is the installer of that equipment that needs to be certified rather than requiring any additional administration on behalf of the project owner. For larger installations, buildings regulations certification will be required from the local planning authority to verify the construction meets the relevant standards.

ii. Water abstraction/pollution

Community-owned hydro installations face greater regulatory barriers than other types of technologies. Specifically, hydro projects often require a licence for the abstraction of water, involving further impact assessments on the ecosystem of the water course, and other additional administrative burdens. One of the issues with this type of permit is that it is individual to the situation and watercourse concerned, therefore making it difficult to provide generic guidance.

In the UK, the Environment Agency has produced an interactive hydro map which allows communities to easily access information about any potential developments in their area.[162] In addition, the Environment Agency has produced a guidance document to help communities think through the issues associated with developing a hydropower scheme.[163] In its recent 'Community Energy Strategy,' the UK government announced plans to set up a Hydropower working group including the government, the Environment Agency and community energy practitioners, to identify barriers and solutions to community hydro schemes.

In general, where there is potential for community micro-hydro projects to be realised, governments should provide guidance on relevant procedures that need to be complied with.

iii. Obtaining a license to produce energy – less burden for smaller generators

In some countries, community power projects must also obtain a license to produce energy. This is, however, an additional technical and time consuming administrative barrier that can prevent community power projects being realised.

Many Member States do not require an additional license to produce renewable energy, particularly for micro-installations. Denmark goes even further, and renewable facilities with a capacity of 10 MW or less are not obligated to apply for a permit to generate power. This does not mean that community power projects do not need to receive approval to access the grid. Nevertheless, it reduces the number of administrative procedures a community power project must go through before being able to come alive.

4.3 Citizen Engagement

When it comes to community power, participation is particularly important as renewable energy – particularly wind – is often a contentious topic within a community. Early engagement can reduce stresses within a community and between communities and project developers. It also provides for better decisions. Research has shown that greater involvement of communities in renewable energy projects produces greater awareness and acceptance.[164] Meaningful citizen engagement is therefore an essential element of successful community power projects and should be encouraged at every stage of the permitting system.

The right to participate in decision-making processes that relate to the environment is provided for in the Aarhus Convention,[165] of which all Member States and the EU itself are parties. With regard to renewable energy, public authorities are required to engage the public when developing spatial plans or frameworks, and in the authorisation of individual projects. In this section, public participation and engagement are discussed in terms of the ability of members of the public to take part and influence these processes. It is important to note, however, that public participation or public engagement in planning decisions should be distinguished from broader participation and ownership in individual community power projects, as discussed in Chapter One. Furthermore, there is a need for individuals to be provided with the capacity to become knowledgeable participants ('energy citizens'), and to exercise their rights to effectively participate in the political dimension of energy policy more broadly.

4.3.1 Community participation in developing spatial planning frameworks

Public participation in the development of spatial planning frameworks can help to establish legitimacy of plans, and increase public awareness of relevant issues. Effective citizen engagement in the framework process can also have a positive influence on participation in the authorisation of individual projects. Depending on the level of

[162] Environment Agency (2014). *Hydropower Schemes: Guidelines for Applying for Permission.*
[163] Environment Agency (2010). *Hydropower: A Guide for You and Your Community.*
[164] Musall, F and Kuik, O (2011). "Local Acceptance of Renewable Energy – A Case Study from Southeast Germany," *Local Environment* 39, p 3253. *See* also Ellis, G (2012). A review of the context for enhancing community acceptance of wind energy in Ireland.
[165] Articles 6 and 7 respectively of the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) (25 June 1998), 2161 UNTS 447.

engagement, involving citizens can also encourage positive attitudes towards renewable energy, and reduce the likelihood of strong resistance during the permitting process for individual projects.

In Denmark, even though not required by law some municipalities have held referendums on proposals for wind sites to be included in the spatial plans. The process to develop spatial planning frameworks will always be dominated by developers who have the ability to employ professionals to represent their interests. It is therefore essential that public authorities ensure that as much information as possible is available in a non-technical form that is easily accessed by concerned members of the public. This can be achieved by making resources available to help community groups engage in the process. This could include planning officers' time, and information held by the authority that could be evidence in favour of a community proposal.

4.3.2 Community participation in individual project development

Effective public participation in individual projects is critically important. At this stage, citizens will often have strong feelings about a concrete proposal for a development, making it essential that information about the proposed development is made widely available and procedures to participate in the permitting process are in place.

In Denmark, it is considered best practice to include the presentation of alternative features of project in the participation process. Due to early engagement, the public is therefore able to influence features of the project such as size and design. Under the Danish Promotion of Renewables Act 2008, the developer of wind turbines must hold a public meeting to explain the consequences of the development for surrounding properties within a specified period.[166] This allows for assessment of any loss in value of properties in the vicinity of the development as this requires compensation, which if shown must be remedied by the developer. Reasonable notice must be given of the meeting. The developer may be required to produce additional materials, including visualisations, promotional materials, consultation for offers to sell shares in turbines and so on.[167]

In Scotland, guidance has been provided in relation to involving the local community in wind development projects.[168] This guidance includes recommendations to encourage local participation in projects by promoting opportunities to influence plans. It also contains recommendations for creating and maintaining up-to-date and complete

[166] Act No. 1392 of 27 December 2008, Promotion of Renewable Energy Act (Denmark). Available at http://www.ens.dk/sites/ens.dk/files/supply/renewable-energy/wind-power/onshore-wind-power/Promotion%20of%20Renewable%20Energy%20Act%20-%20extract.pdf.
[167] *Ibid.*
[168] *See* Good Practice Wind website. Available at http://project-gpwind.eu/index.php?option=com_content&view=article&id=36&Itemid=218&phpMyAdmin=168bb9b8283612a1d3324564202cce92.

websites, social media networks and newsletters about the project and its environmental and economic impacts and benefits to the locality. This allows members of the community to stay well informed about the progress of the project and prevent misinformation and misunderstandings. This is likely to be beneficial in maintaining relationships between all stakeholders during the permitting process and beyond.

There is room for improvement in the processes employed for public participation in all the countries studied. There is little provision for the inclusion of disenfranchised groups within the community such as the elderly, the young and ethnic minority groups.[169]

United Kingdom

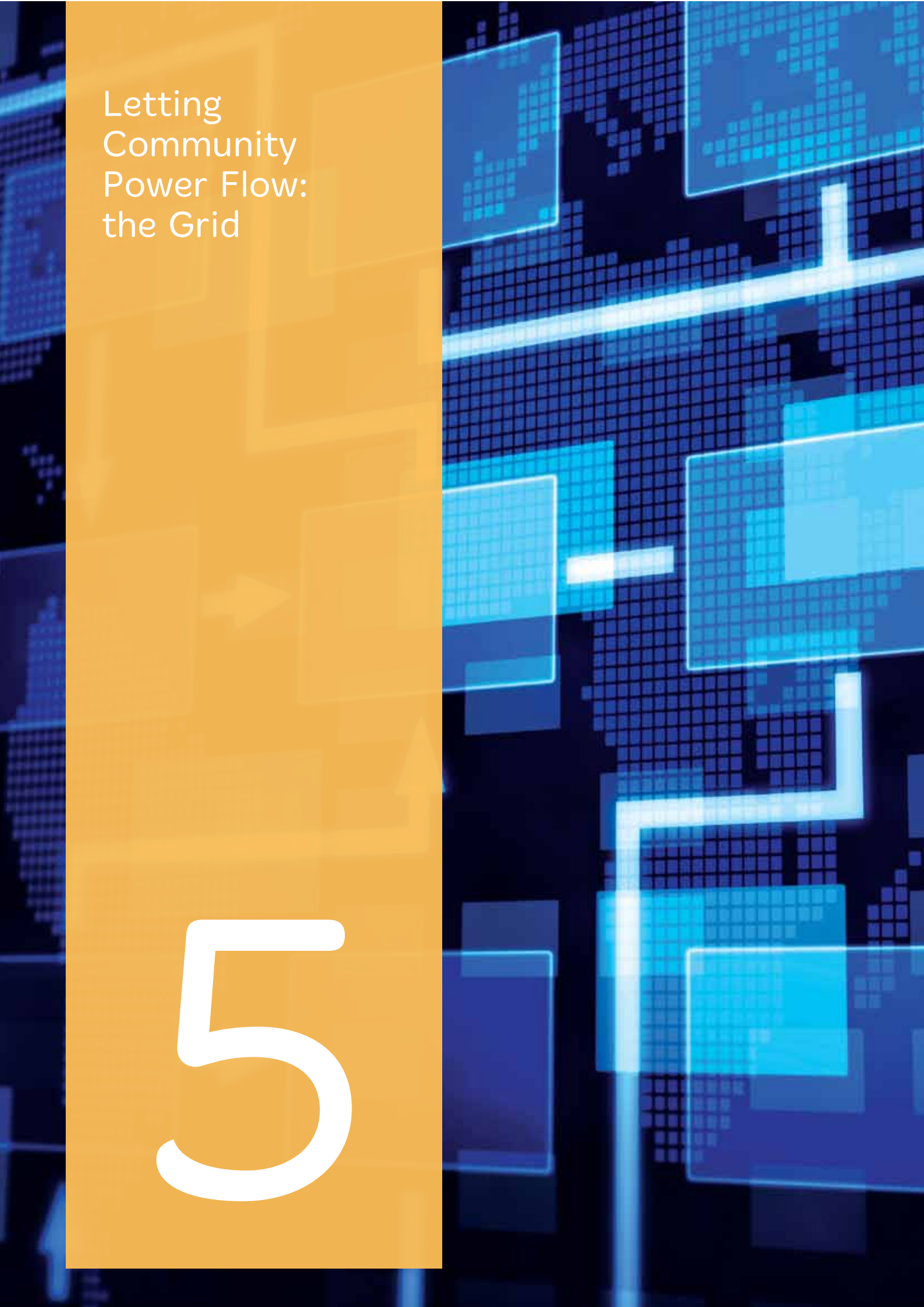
Constructive political engagement with vocal minority opposition: Tiree Community Turbine, Scotland

The Tiree Community Turbine is a good example of how persistent public engagement can help win over hearts and minds to community power. Tiree is a small island off the Scottish Highlands with a population of approximately 750. This community successfully constructed a 950kW wind turbine owned by the community Development Trust through a limited company. However, the planning process for this project took over four years and met several hurdles. A vocal group of seasonal residents (people who own holiday homes but do not live on the island year round) opposed the project on the basis of its visual impact. In addition, it was obvious from the outset that the planning officer shared in the opposition's concern, citing visual impacts as the reason for recommending refusal. The council initially followed the officer recommendation and refused permission for the project. However, the community group supporting the project held a referendum of those registered to vote to demonstrate that a significant majority of people living permanently on the island supported the project. While having no legal status, the referendum was used as evidence of community acceptance. Held alongside further discussions with the planning officer and strong engagement of citizens other political actors, the project gained the required permission for the turbine.

[169] *See* Royal Commission on Environmental Pollution (1998). Environmental Standards and Public Values. Available at http://webarchive.nationalarchives.gov.uk/20080726220734/http:/www.rcep.org.uk/pdf/standardssummary.pdf.

Letting Community Power Flow: the Grid

5



Grid connection is essential for community power, as without it this energy cannot flow. However, it has been widely recognised that grid connection is a significant hurdle for community power projects.

A number of challenges exist in connecting renewables installations to the grid, not all of which are specific to community power. The first challenge relates directly to competition. Because of their high costs and small market size, grids generally operate as monopolies with little competition. Before electricity and gas markets were liberalised, these monopolies were controlled by large 'vertically integrated' enterprises,[170] which also controlled energy production and supply. In order to protect themselves against competition, companies could simply create barriers preventing other enterprises from accessing and using the grid.

[170] A vertically integrated enterprise is a company that engages in different aspects of a supply chain through common ownership and management. In the case of energy, a vertically integrated enterprise would be involved in generating energy, grid ownership and management, and supply of energy to consumers.

The EU's Third Energy Package[171] and Directive 2009/28/EC (Renewables Directive) have aimed to address this issue. Under Article 16(b) of the Renewables Directive, renewable energy sources are required to be provided with either 'priority' or 'guaranteed' access to electricity grids. Accordingly, approximately one-third of Member States, including Spain and Germany, provide renewables with priority access.[172]

However, a number of challenges remain including: historic control and development of grids for conventional energy (fossil fuel) transmission and distribution; lack of grid capacity to integrate decentralised renewables production, creating the need for investment in technical adaptations (e.g. new grid connections, reinforcements and extensions); high connection costs; and complicated connection procedures. An additional challenge presented to community power projects relates to location: many communities are by definition 'local'. As such, they have limited options for where to connect, increasing the need for technical adaptations for larger community power projects.

The following details best practice – much of which focuses on Denmark and Germany as clear EU leaders – for allowing community power to connect and use the grid. However, there is still much room for developing fairer and more equitable rules that provide community power projects with the means to connect and use grids. Furthermore, no one regulatory framework has taken all challenges faced by community power projects fully into account, and there is still a need to enhance efforts to integrate distributed renewables generation – particularly into local distribution grids.

This chapter provides best practices examples of how regulatory burdens can be reduced, and how certainty can be increased for community energy projects. This includes national planning policy and spatial planning frameworks; individual permitting; and obtaining necessary licenses. It then discusses the procedures in place to provide for citizen engagement in the permitting process.

5.1 Facilitating Grid Access for Community Power

Available capacity for grids to receive energy produced from community power, equitable access cost arrangements, and clear and transparent procedures are essential for promoting community power. Grid capacity is a major issue, because it affects the space available for additional projects to connect and takes additional time and costs if expansion of grid capacity is needed. In many instances, community power projects can be prevented from going forward, either because they are denied access by the grid operator or because grid expansion is too expensive.

5.1.1 Ensuring space for community power on the grid

While guaranteed access can benefit renewables in general, community power projects still experience difficulties where capacity issues exist. For example, in the UK it is possible to receive permission to access the grid without having concrete plans of completing the project, which has resulted in larger developers taking existing connection points at the expense of community projects.

One way to get around this issue is to impose a continuing legal duty on the grid operator to take reasonable steps to address capacity. In Denmark, there is a general right for all installations to connect to the grid, without discrimination.[173] There is no priority of access for existing installations; new installations also have a right to connect to the grid.[174] The grid operator also has a duty to expand grid capacity, to the extent necessary, with special attention to be paid to renewable energy sources;[175] if the distribution system operator (DSO) is unable to do so, it is the responsibility of the transmission system operator (TSO), Energinet.dk.[176] The law in Germany imposes similar obligations on the network operator. Under the Energy Industry Act (*Energiewirtschaftsgesetz* – EnWG), the grid

[171] The EU's Third Energy Package consists of: the Third Gas and Electricity IEM Directives; Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity; Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks; and Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators.
[172] Simonds, V and Hall, B (2013). *Overcoming Grid Connection Issues for Community Energy Projects,* p 14, prepared by Cornwall Energy for Co-operatives UK and the Co-operative Group.
[173] Act No. 516 of 1 January 2010 on Electricity Supply, section 24.
[174] Act on Electricity Supply, section 26. *See* also Danish Ministry of Climate, Energy and Building (2010). National Action Plan for Renewable Energy in Denmark, p 58.
[175] Act on Energy Supply, section 21.
[176] Act on Energy Supply, section 20.

operator has a statutory duty to connect renewable energy plants to the closest technically suitable point.[177] The grid operator is also required to optimise, boost or expand the grid if necessary, as long as it is economically reasonable.[178]

This arrangement between grid operators and project proponents can help to ensure equitable access arrangements that do not disadvantage smaller community power projects. Nevertheless, in order to ensure that grid operators do not use lack of capacity or expense as an excuse to refuse connection, criteria for coming to such a determination must be defined. For instance, in Germany a test that weighs the interests of the plant operator against the grid operator is applied to determine whether expansion is economically reasonable.

Additionally, grid access rules should prohibit 'hoarding' of access points by larger developers, or should prioritise a certain percentage of existing grid access points for community power projects. In the UK, a Network Connections working group being led by Ofgem is currently working on ways to ensure projects can access the grid, which will hopefully consider these options.

5.1.2 Ensuring grid access costs are not prohibitive for community power

The cost of connection will often determine whether a community project moves forward, and this becomes an issue where the grid needs enhancements. The Renewables Directive prohibits grid connection charges from being discriminative against producers of renewable energy.[179] While this has been implemented with regard to renewables projects generally, very few Member States have addressed issues that pertain specifically to community power projects.

Partial socialisation of grid connection costs could certainly help reduce barriers for community power. In Denmark, grid connection costs are both socialised and shared between the plant owner and the grid operator. Plant operators are responsible for costs of connecting to the most technically suitable point, but no more than it would cost to connect to the 10-20 kV grid.[180] All other costs, including necessary reinforcements, are borne by the distribution grid operator.[181] This obligation sits beside the grid operator's continuing duty to expand grid capacity for renewables.[182] These costs are then passed on to consumers in the form of a public service obligation (PSO) tariff, which is based on the amount of consumption.[183] Because costs are socialised, before investing in grid reinforcement, the grid operator must receive permission from the Danish Energy Regulation Authority (DERA, or *Energitilsynet*). The Minister for Climate and Energy also has authority to establish more detailed regulations on the distribution of grid connection costs.[184]

[177] Act about electricity and gas industries, amended from 7 July 2005 (Energiewirtschaftsgesetz, EnWG), section 5(1).
[178] EnWG, sections 5(4) and 9(3).
[179] Renewables Directive, *above* note 77 at article 16(3).
[180] Act on Energy Supply, section 67.
[181] Act on Energy Supply, section 67.
[182] Act on Energy Supply, section 21.
[183] Act on Energy Supply, section 8(7).
[184] Promotion of Renewable Energy Act 2008, section 30.

The grid operator's duty to request permission for reinforcements may result in time delays and some uncertainty. Nevertheless, in Denmark grid costs are still relatively low, particularly when compared with other EU Member States. Overall, grid connection costs represent between 1-1.4% of total project costs (this is because DSOs/TSOs must cover costs for reinforcement).[185] As will be explained in the following section, concerns about delays can be minimised through clear and transparent rules related to grid connection and development.

5.1.3 Making the connection process easy to follow

Clear procedures for grid connection, along with transparency and communication between grid operators and generators, can enhance predictability for community power projects. In order to maximise certainty, such procedures should ideally be established through clear rules and regulations that are imposed upon the grid operator.

Denmark's procedures are widely recognised as fairly simple and transparent.[186] Grid operators are expected to provide installations requesting access with all necessary information on:

- Detailed estimates of costs for connection;
- A reasonable and precise timetable for processing the grid connection application; and
- A reasonable indicative timetable for grid connection itself.[187]

Grid connection procedures are not specified by law. For instance, there is no statutory deadline for connection. Nevertheless, lead time for obtaining a grid connection permit in Denmark is approximately 2.1 months, the fastest in the EU.[188] Furthermore, the connection process in Denmark is streamlined; only one permit is required for all installations, and developers only need to deal with the relevant grid operator.[189] If permission for additional works or reinforcements is needed, the operator will be responsible for obtaining consent for such works, and subsequent connection.

In Denmark, where governance is quite strong and cooperation between the public, regulators and private operators is high, the system works quite well. However, this is not the case in all countries. Therefore, it will usually be more appropriate to establish statutory obligations for grid operators in order to protect community power installations from discriminatory or abusive treatment during the connection process. This may be of concern particularly when reinforcements are needed. Even in Denmark, the lack of a clear process for justifying costs related to reinforcements has been seen as a potential barrier. This is an issue that is likely to become increasingly difficult, particularly as the share of renewables continues to increase. As such, procedures should provide clear and defined obligations for grid operators, particularly for reinforcements.

In Germany, while it is up to the grid operator to determine the individual connection process, various aspects are set out by statute. There is a duty for the grid operator to connect "without undue delay."[190] Upon application, the grid operator is required to provide a precise timetable for processing the connection request, along with a list of all the information required by the operator to determine grid connection points, or to plan expansion.[191] Within eight weeks of receiving this information, the grid operator must provide a timetable for establishing grid connection, information for testing grid connection points, and if requested, comprehensive and detailed estimates of costs for establishing the connection, and data to test grid compatibility.[192]

This last requirement is particularly relevant for allowing potential community power projects to conduct an upfront assessment of capacity and technical restrictions. Such information should be public and kept updated or at least accessible on demand.

Member States should also consider establishing incentives or penalties for failing to connect community projects within a reasonable timeframe. For instance, in Germany deadlines are not always respected.[193] In Denmark, Energinet.dk may be

[185] European Wind Energy Association (EWEA) (2010). *Wind Barriers: Administrative and Grid Access Barriers to Wind Power,* p 89.
[186] Pobłocka, A *et al* (2011). "National Report: Denmark," *Integration of Electricity from Renewables to the Electricity Grid and to the Electricity Market – RES-Integration,* p 17. Prepared by eclareon and Öko-Institut e.V. for DG Energy, Berlin, 20 December 2011.
[187] Executive Order 1063/2010, section 2(2). See also Pobłocka, A (2013), "Grid Issues in Denmark," *RES Legal* (25 October 2013). Available at http://176.9.160.135/search-by-country/denmark/tools-list/c/denmark/s/res-e/t/gridaccess/sum/95/lpid/96/.
[188] EWEA (2010), *above* note 185 at p 89.
[189] Danish Ministry of Climate, Energy and Building (2010), *above* note 174 at p 58.
[190] Renewable Energy Sources Act 2009 (*Erneuerbare-Energien-Gesetz* – EEG), section 5(1).
[191] EEG, section 5(5).
[192] EEG, section 5(6).
[193] EWEA (2010), *above* note 185 at p 102.

held liable if it fails to comply with time limits and conditions established during the tendering procedure for offshore projects. In Germany, the transmission grid operator may be held liable if, due to its negligence, offshore wind plants are delayed in accessing the grid.[194] Moving forward, such an obligation may also be appropriate for smaller community power projects, in order to incentivise priority and increase certainty.

5.2 Maximising Community Benefits from Using the Grid

Once a community power project is connected to the grid, ensuring that it is able to sell the energy that it produces guarantees that particular benefits will be realised. In addition, assuming it aligns with their goals, communities should be able to have certainty that their efforts are contributing towards broader objectives, such as local decarbonisation of energy supply and self-sufficiency.

5.2.1 Ensuring community power helps realise community 'objectives'

Community power benefits from EU rules that prioritise the use of renewables. Article 16(2)(c) of the Renewables Directive, and Article 15(3) of Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (Third Electricity IEM Directive), requires TSOs to give priority to renewable energy generating installations in dispatch decisions, subject to security concerns. DSOs may also be required to prioritise the dispatch of renewable energy sources.[195] However, there is no priority between different renewable energy sources. Rules that regulate the conditions by which distributed renewable energy generators are allowed to connect and use the grid are laid down by individual Member States through network codes.

Some Member States, including Germany and Spain, prioritise the feeding in of electricity from renewables as long as certain technical conditions by the operator are met.[196] In Denmark, producers of renewables are also entitled to priority of use as against other installations.[197]

Article 16(7) of the Renewables Directive also ensures that renewables are not discriminated against in the charging of transmission and distribution tariffs. In most Member States, the plant operator is responsible for paying to use the grid in order to feed-in their electricity. In Germany, however, the grid operator buys electricity from the producer; therefore, costs that arise from the purchase and transmission of electricity are shouldered by the grid operator, and then passed on to the consumer.[198] This model can help renewables installations save on operational costs, which also benefits community power.

[194] EnWG, section 17 (f) para 2.
[195] Third Electricity IEM Directive, *above* note 87 at article 25(4).
[196] Royal Decree 661/2007, annex XI nr.4; EEG, section 8.
[197] Act on Electricity Supply, section 27(c)(5).
[198] EEG, section 16.

For community power, local use of renewables may be a distinct aim. To support this objective, distribution-level grid infrastructure should also receive sufficient attention for development (e.g. through storage, energy efficiency and demand response, and development of smart distribution systems).[199] In doing so, power that is generated locally can be used by the community, as opposed to simply being exported. This is a particular issue for community power in Germany, where, because the EEG has guaranteed payments to producers irrespective of demand, surplus power is often sold to neighbouring countries at low rates. While this need not be an exclusive goal of grid management, if prioritised it can create opportunities for local investment and increasing local energy security.

A call awaiting: the need to promote community participation in development of network codes

Network codes, which are a set of legally binding regulations that govern how and under what conditions electricity can be exchanged between Member States in an internal energy market, are an important tool for addressing this issue. These codes, which also cover how to deal with challenges regarding penetration of renewables, security of supply and demand response, determine whether and how generators can sell their electricity locally. Network codes are currently being developed with participation from the European Network of Transmission System Operators for Electricity (ENTSO-E), the Agency for the Cooperation of Energy Regulators (ACER), and the European Commission. As these network codes are developed and improved, in addition to ensuring cooperation between Member States there should be a focus on ensuring the prioritisation of use of distributed renewables generation locally (e.g. through promotion of energy efficiency and demand response measures, utilising local consumers and generators). This could be pursued through, for instance, regional governance arrangements between Member States (i.e. an energy market initiative between different Member States). However, for this to occur there is a need for enhanced transparency of data and management procedures, as well as awareness raising and participation from civil society.[200]

In general, countries are struggling with how to effectively and safely integrate increasing shares of renewables into the grid. A thorough look at regulatory frameworks to promote the local integration of renewable sources into energy systems (i.e. smart grids and smart energy systems) is beyond the scope of this report. Nevertheless, the issue must be addressed if an energy transformation is going to be a long-term success. In particular, there may be a distinct role in the development of domestic regional and EU network codes to promote transparency of decisions about local use versus export. How this issue will be addressed is essentially a question of governance, one that necessitates a deep look at commercial arrangements, and the roles and responsibilities of actors such as DSOs, TSOs, governments at all levels, individual citizens, and local associations. The roles these latter groups can play, moving beyond simply generating energy, is addressed in the next chapter.

5.2.2 Keeping the community power 'flowing'

The more power a community generates, the greater the potential benefits. However, if more electricity is being generated than meets demand – and hence there is more than the grid can handle – the system operator must 'curtail' sources of energy to maintain grid stability. When this occurs, under the Electricity IEM Directive TSOs may give priority to the dispatch of generating installations using indigenous primary energy fuel sources for reasons of security.[201] This can present a problem for community power, particularly because renewables installations cannot control when the sun shines or when the wind blows.

In response to requirements under the Renewables Directive,[202] Member States have taken measures to minimise curtailment of renewable energy sources, which also benefits community power. In Denmark, when curtailment must occur conventional energy sources are required to reduce

[199] *See* e.g. Hvelplund, F (2013). "Local Ownership, Smark Energy Systems and Better Wind Power Economy," *Energy Strategy Reviews* Vol 1, pp 164-170.
[200] Turner S, Poplowski, P and Formosa, A (2013). *Scoping Study: Proposed Interventions to Optimise Energy Efficiency and Demand Response in EU Network Code Development.* (ClientEarth: London).
[201] Third Electricity IEM Directive, article 15(4).
[202] Renewables Directive, article 16 2(c).

their feed-ins to the grid first; only subsequently may renewable energy sources be curtailed. Nevertheless, this may be overruled if there is a threat to network security.[203]

In Germany, renewables are provided with priority use of the grid unless other installations must remain connected in order to guarantee safety and reliability of the electricity supply system.[204] Interestingly, solar installations with a capacity of up to 100kW may only be curtailed after other installations, and the operator must ensure that the largest possible quantity of electricity from combined heat and power (CHP) is purchased. Furthermore, if such installations must be curtailed, the grid operator must provide prior notification to the generator. Once curtailed, the grid operator must inform the generator of the extent, duration and reasons for curtailment, and upon request, provide evidence that the measure was necessary.[205]

Grid operators may also enter into voluntary contracts with generators that would allow the operator to curtail the installation's output.[206] This can be an effective way to allow flow management without expanding the grid. If under this contract the generator is not allowed to feed-in what has been agreed, they may be able to recover lost tariffs and revenues from the grid operator.[207]

Germany's system, with particular protections for smaller solar installations, demonstrates a regulatory system that values smaller citizen-owned sources over others when curtailment must occur. Protection for smaller solar installations from discriminatory curtailment also benefits larger onsite community power installations. Similar procedures for curtailment should be developed to protect other types of community power projects, particularly smaller installations that are used primarily for self-consumption, and consequently have less impact on the grid.

[203] Act on Electricity Supply, section 27(c)(5).
[204] EEG, section 11.
[205] EEG, section 11(3).
[206] EEG, section 8(3).
[207] EEG, section 12.

Supporting Effective Energy Citizenship

6

As demonstrated throughout this report, increasingly we are seeing examples of citizens and communities aiming to become a part of the energy transition. However, these efforts are greatly impacted by the actors that have historically dominated various points along the energy delivery system, for example through control of transport and supply.

Legal frameworks have not been constructed to empower 'energy citizenship', which can be seen as a wider consciousness that citizens and communities can contribute to the energy transition. Energy governance systems have traditionally been based on maintaining monopoly structures that benefit large politically powerful enterprises, with citizens largely seen simply as passive consumers. Community power demonstrates a break from this paradigm. In addition to simply owning production of green energy, citizens are now devising creative legal strategies to chip away at other areas in this energy hierarchy, for instance in the areas of grid ownership and management, and supply. This can have a self-reinforcing effect, as other community-oriented enterprises can better understand and support the practical needs of community power projects.[208] Below is an overview of some these strategies.

While beyond the scope of this report it is important to note that participation in the policy-making process is a fundamental element of empowering the 'energy citizen'. There is a need for individuals to be provided with the capacity to become knowledgeable participants and to exercise their rights to effectively participate in the political dimension of energy policy.

[208] *See* e.g. REScoop 20-20-20 (2013), *above* note 3.

6.1 Community Grid Ownership and Management

As explained in Chapter Five, accessing grids poses significant barriers for renewable energy, and community power in particular. One approach to addressing this issue has been to impose duties on grid operators to prioritise access and dispatch of electricity from renewable energy sources, and to require national regulatory authorities to remove barriers preventing new market entrants from access.[209]

However, the role of grid operators is not simply to determine access. They also determine priorities for investments and development of infrastructure. This investment can be significant,[210] and it affects the bottom line for utilities that have traditionally made profits from fossil fuels. Despite EU requirements to legally separate grid management and ownership from energy generation and supply 'independance', this can be in legal form only. There is a need to ensure independent grid operators manage networks in a way that facilitates the incorporation of larger amounts of renewable energy, and community power in particular.

The following sub-section provides an example of how rules on grid ownership and management may be used to prioritise the integration of renewables, particularly at community level. The subsequent sub-sections then highlight different models for community ownership or control of local grids.

6.1.1 Transmission and distribution as a public good

Where important infrastructure such as electricity grids are under public control or prioritise public interests such as the environment, they may be more capable of directing adequate investment in adaptations to integrate increasing levels of renewable energy, including community power.

This is the case in Denmark, which has developed some unique approaches not common to other energy markets. Before EU energy market liberalisation in 1999, both electricity and heat supply were seen as common goods. Therefore, operators providing energy services were regulated under a full-cost recovery principle. This meant that surplus revenues had to be realised by the consumer in the form of lower charges instead of being realised as profits by the enterprise.[211]

In 2000, the electricity market was liberalised. However, the transmission and distribution of electricity is still subject to special rules to ensure that profits are not prioritised over consumer interests or long-term investment in grid expansion. The Danish Energy Regulatory Authority (DERA) is the entity in charge of overseeing national energy networks. DERA regulates prices for distribution and transmission, which are still based on a non-profit concept, and are regulated through caps on tariffs.[212] Furthermore, electricity and gas infrastructure are required to remain public property.[213]

Transmission networks for electricity and gas are overseen by Energinet.dk, an independent and non-profit State-owned enterprise established under authority provided to the Minister for Climate and Energy.[214] Energinet.dk also oversees distribution, which is largely conducted by consumer-owned co-operatives, municipalities, and private operators. As the Transmission System Operator (TSO), Energinet.dk's main objective is to ensure efficient operation and expansion of the overall electricity and gas infrastructure, and to ensure open and equal access for all users of the grids.[215] Energinet.dk is also required by statute to ensure that certain public service obligations (PSOs) are met, including development for future environmentally friendly and energy efficient electricity transmission and distribution.[216]

This legal framework has helped to clarify the role of TSOs and distribution system operators (DSOs), which includes ensuring sufficient grid capacity to handle additional renewables supply. Furthermore, because the grid is operated as a non-profit activity, there is no conflicting interest between financial returns and ensuring sufficient investment in grid expansion. This regulatory framework has arguably helped to benefit community power. This is not to say that Denmark does not face significant issues over the future of its grid and how it will integrate an ever-increasing share of renewables into its market. However, public ownership, along with statutory duties related to the promotion of a secure transition to renewables is a good example of a governance arrangement that is more capable of prioritising community power. If appropriate, national governments should consider special rules to ensure grid operators, prioritise grid expansion in compatibility with growth in renewables, particularly in distribution.

[209] Third Electricity IEM Directive, *above* note 87 at articles 15 and 36(3); and Renewables Directive, *above* note 77 at article 16(2).
[210] For example, in July 2012 UK regulator Ofgem announced plans to invest £15bn in the upgrade and renewal of the high voltage electricity network in England and Wales and the high pressure gas networks across Britain. *See* https://www.ofgem.gov.uk/ofgem-publications/76263/20120716riiopressrelease.pdf.
[211] Margrethe Basse, E (2013), *above* note 5 at p 41.
[212] Act on Electricity Supply No. 1329 of 2013, chapter 10, sections 69-75.
[213] Act on Energinet Danmark, Act No. 1384 of December 20, 2004, article 1(2).
[214] Act on Energinet Danmark, article 1(1).
[215] Energinet.dk (2005). Articles of Association of the Independent Public Company of Energinet.dk, article 3.
[216] Act on Electricity Supply, section 28 (1) and (9)-(11).

If this is not possible, public ownership should at least be an option so that local authorities have the ability to prioritise distribution grids for community power. In Belgium, for instance, many local distribution grids are owned and managed by local governments, sometimes by grouping together as co-operatives.

Netherlands

The CJEU supports public control of energy infrastructure: *The Netherlands v. Essent NV*

Public control of energy infrastructure was strongly supported by a recent decision of the Court of Justice of the European Union (CJEU). In *The Netherlands v Essent NV,*[217] the CJEU concluded that Member States are allowed to establish rules that require public ownership of certain undertakings.[218] While such rules must not impede the free movement of goods,[219] the CJEU held that various Dutch rules including a prohibition on the privatisation of transmission and distribution networks could be justified on public interest grounds of guaranteeing independence and adequate investment in distribution systems and to ensure undistorted competition.[220] This case did not speak directly on the point of treating energy infrastructure as a public good, or requiring transmission or distribution to be conducted according to non-profit principles. Nevertheless, the argument could potentially be made that regulating grid infrastructure according to non-profit principles could be based on reasons similarly relied on in the Essent case. While there are many other hurdles that governments must face, this precedent provides room for governments to take back control of energy infrastructure to maintain security of supply (e.g. continuity, quality, and reliability of supply) and maintain independence during the energy transition, for instance through guaranteeing continued investments in networks.

6.1.2 Communities taking back control - remunicipalisation

Community ownership of local grid infrastructure is becoming an ever more important topic. In particular, there is a growing movement to 'remunicipalise' – or take back – distribution grids controlled by large corporate utilities.

Germany has been at the centre of this movement. Distribution grids are regulated under concession agreements between the operator and relevant local authorities, usually the municipality. According to the German Energy Industry Act (*Energiewirtschaftsgesetz* – EnWG), the operator is entitled to obtain legal ownership – not just a right of use – of grid infrastructure.[221] In entering into concession agreements municipalities must abide by specific objectives, and when a concession ends other bidders may compete for it. Communities are now using this process to reclaim grids that have been privatised over the past 30 years. Increasingly, co-operatives are being established in order to bid – sometimes successfully – for community grid ownership.

[217] Cases C-105/12 to C-107/12 *Staat der Nederlanden v Essent NV,* Judgment given 22 October 2013.
[218] *Ibid.* at paras 30-31.
[219] Article 63(1) TFEU.
[220] *Staat der Nederlanden v Essent NV, above* note 217 at paras 56-59.
[221] Act about electricity and gas industries, amended from 7 July 2005 (*Energiewirtschaftsgesetz* – EnWG), section 46.

Germany

Remunicipalisation goes mainstream: from Schönau to Hamburg, Germany

The first citizen takeover of a distribution grid occurred during the mid-1990s in Schönau, a small German town with 282 citizens near the border of Switzerland. Desiring to demonstrate alternatives to nuclear power, and frustrated with the local grid operator, a small group of citizens founded ElektrizitatsWerke Schönau (EWS). After a long-fought campaign that included two referendums, EWS won the concession to the grid in 1997. Since Schönau there have been several more successes. In September 2013, the citizens of Hamburg, the second largest city in Germany, held a referendum on whether or not the government should buy back their local electricity, gas, and district heating grids. With slightly over 50% in favour, the referendum was successful. Prior to the referendum, 25.1% of the operating company was owned by the state of Hamburg. However, this was unacceptable to the citizens, who saw a lack of prioritisation for renewables in their city. The whole process was finalised in January 2014, when Hamburg reached an agreement with the current majority owner, Vattenfall, to buy back the electricity grid.

Where municipal governments are not interested in change, citizens are increasingly making their demands heard through referendums. Through these 'citizens initiatives', communities can call on local governments to buy back grid networks, establish a public entity (e.g. *Stadtwerke*) with citizen oversight that will support renewables development, or to establish cooperation with another private entity (e.g. co-operative).

Germany

Bill on remunicipalisation of the grid in Berlin, Germany

At the end of 2014, Vattenfall's licensing agreement to run Berlin's electricity grid expires. Citizens believe a new grid operator is needed to expand it to enable feeding in as much small-scale renewable energy as possible. It should also adjust interconnection with the state of Brandenburg, which has a lot of installed renewables capacity, and prepare for further development. Therefore, in November 2013 a local referendum aimed to adopt a Bill on Remunicipalisation of the public electricity grid. Key components of the Bill included:

- Purchase plan: A study commissioned by Berlin valued the grid at €370 million. Buy-back would have been financed on a long-term basis through statutorily-secured grid tariffs.
- Institutional structure: The Bill foresaw the establishment of two municipally-controlled institutions:[222] *Berliner Stadtwerke* and *Berliner Netzgesellschaft.*
- The *Berliner Stadtwerke:* Its long-term aim would be to convert Berlin's energy supply into 100% renewable-generated. The task of the *Berliner Stadtwerke* would be to secure installation and extension of enough regional generation and distribution capacity for renewable energy, and promote energy savings. During the transition, additional high-efficient cogenerating power plants based on using as much energy from sustainable sources as possible would have been promoted.
- The *Berliner Netzgesellschaft:* Although it was not proposed in the Bill, the authors mentioned the possibility of entrusting district heating and gas grids to a newly established *Berliner Netzgesellschaft.* Hence, there was an intent that citizens' initiatives, eNGOs and other entities, like co-operatives, would participate.
- Priorities: The *Berliner Stadtwerke* would have been required to secure energy generation that would be in line with demand, reconcilable with a welfare state and environmentally friendly.

Voting took place on the 3rd November 2013. While 83% voted in favour, it failed to turn out the minimum voters needed by approximately 21,000 votes.[223]

[222] Corporate form would be German *Stadtwerke* and the legal form would be *Anstalt des öffentlichen Rechts* (form of a public institution).
[223] *See* further http://www.zeit.de/wirtschaft/2013-11/volksentscheid-berlin-energieversorger.

This growing movement is very useful for supporting community power. Because these new grid operators are driven by the desire to facilitate the energy transition, they prioritise profits towards developing network grid expansion to accommodate increased feed-in from local renewable energy sources. Furthermore, renewables installations are given extra priority in grid connection, for instance through reduced connection times, and direct support and advice in getting necessary permits and licensing. Established from the ground up, they are also more likely to support broader local initiatives to promote energy awareness and efficiency, for instance through cooperation with local energy service companies (ESCos). These are all factors that could be valuable for promoting community power and the benefits it can offer.

6.1.3 Exercising self-sufficiency through independent networks for electricity

Some communities with a strong desire to become self-sufficient in meeting low carbon energy needs have decided to develop their own localised grids. This infrastructure, often independent of national transmission and distribution networks, can be for electricity, gas or heating and cooling (see next section). Typically, these types of grids are developed in very remote regions, such as islands. However, communities in rural and even urban areas are beginning to develop such networks.

Before trying to establish an independent network, a community group should first develop a clear understanding of applicable regulations. EU legislation lays down specific requirements for grid operators to allow other suppliers to access transmission and distribution networks for gas and electricity.[224] There are certain exceptions for 'small isolated systems' and 'micro-isolated systems', but these apply only for areas of very little consumption with little or no connection to larger grid networks.[225] Nevertheless, for distribution networks that serve less than 100,000 customers or small isolated systems, the distribution grid operator may be allowed to combine its business activities with those of generation and supply, subject to Member State discretion.[226]

In Germany, private grids have been utilised to literally take communities off the grid. Private grids are regulated under the EnWG. According to Section 4(1) of the EnWG, becoming a network operator is subject to permission, which is regulated under state *(Bundesländer)* law. As long as an entity meets specific conditions that relate to reliability and sufficient human, technical and financial resources, it should have a right to receive permission to become a network operator. Local energy network and supply is also a unique element of local self-government *(kommunale Daseinsvorsorge),* which is guaranteed by the German Constitution.[227] With this authority, local governments have a right to decide whether to fulfil the tasks of local network and supply, either as a public enterprise under direction of the local government, or through a contract with another private enterprise. Because it implies risk and cost, local communities may need to still convince other regional and local authorities that establishing a new grid is a good idea, as well as outside funding. Nevertheless, the ability of local governments to establish and operate local grids independent of larger networks is a very useful tool for small communities that want to become self-sufficient based on renewables.

[224] *See* Third Electricity IEM Directive, articles 12(h) and 32(1); and Regulation 715/2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, articles 14(1)(a)-(b) and 15(1)(a).
[225] Third Electricity IEM Directive, article 2(26) and (27), and article 44.
[226] Third Electricity IEM Directive, article 26(4).
[227] Basic Law, article 28(2). Available at https://www.btg-bestellservice.de/pdf/80201000.pdf.

Germany

A 100% renewables community comes alive: Feldheim, Germany[228]

Feldheim is a good example for small communities intent on achieving 'autarky' from fossil fuel energy supply. Just outside of Berlin, this small farming town of 150 people has steadily been moving towards self-sufficiency from renewable energy sources. It started when Energiequelle GmbH, a renewables developer, established a wind farm on lands leased by local farmers, which now consists of 43 turbines and an installed capacity of 74.1 MW. In 2008, a solar farm that produces 2,700 MWh per year was installed on an ex-Soviet military site. At that point, the town also decided to enter into a joint venture with Energiequelle to establish a combined heat and electricity (CHP) plant, which uses biogas produced from pig manure and unused corn from the community. With a woodchip heating plant as backup, citizens are able to produce all of the heat and electricity they need.

Emboldened by the remunicipalisation movement, the town offered to buy back the district grid from E.on, a large multinational energy utility. When E.on refused, each of the 150 residents from Feldheim contributed €3,000, which along with contributions from Energiequelle, the EU and the government was enough to construct independent heating and electricity grids. The heating grid is owned by Feldheim Energie GmbH & Co. KG, with Energiequelle as the general partner, while connected households and the municipality of Treuenbrietzen are limited partners. The electricity grid is owned by Energiequelle GmbH and Co. WP Feldheim 2006 KG. Finally, they also installed an electrical vehicle charging station, and have plans to install a 10 MW battery, which will help maintain grid stability. From all of this, the town and its residents have been able to see many benefits including local ownership of renewable energy production, grid operation and supply. Furthermore, citizens are employed to maintain local renewables installations, and are collectively able to decide how much they will pay for heat and electricity, which is 31% cheaper than what they were paying before. While Feldheim has some unique characteristics that have allowed it to succeed, for instance an abundance of variable sources of renewables, it serves as a source of inspiration as to what is possible for communities that are intent on achieving energy autarky.

[228] Excerpts taken from Guevara-Stone, L (2014). "Guess Why People in This Tiny German Town Pay 31% Less for Electrity?" *Climate Council Blog* (8 March 2014). Available at https://www.climatecouncil.org.au/guess-why-people-in-this-tiny-german-town-pay-31-less-for-electricity.

6.1.4 District heating and cooling

While much of the focus on community power tends to focus on electricity, heat also plays an important role in decarbonisation. First, district heating stations tend to mix electricity and heat generation, making the generation of heat more efficient. Furthermore, because the delivery area is smaller, losses are minimised between generation and consumption points. Additionally, they can be useful in integrating renewables when combined with storage technologies and other forms of generation such as solar and wind. Because they are small closed systems (typically within a region or municipality), they are generally 'local' by definition, and also ideal for local ownership and management.

District heating enjoys varied levels of policy support between different Member States. Among countries where district heating is promoted, Denmark is perhaps the leader. Denmark has promoted district heating since the beginning of the 20th Century, when the first waste-to-heat plant was developed in Frederiksberg, a municipality in western Copenhagen.[229] Because district heating requires a long-term development and investment strategy, to guarantee development and protect consumers in urbanised areas its development was entrusted to municipalities. In rural areas and small towns, these systems have also usually been customer-owned.[230] This has been possible because heating was not liberalised (unlike electricity in 1999) and has always been regulated based on full-cost recovery, making it a non-profitable activity. Therefore, district heating has not been subject to pressures of liberalisation.

In Germany, renewable district heating is also strongly promoted, both in large cities and small towns. District heating is regulated in the same way as local energy networks, which is described in Section 6.1.3 above. This has helped to promote a strong presence of municipal ownership of district heating. In order to ensure investments are covered by sufficient demand, under defined legal conditions local governments have the authority to require local building owners to connect to the network.[231] These laws are established according to the *Bundesländer.* This legal tool has been particularly useful for local governments that aim to pursue climate protection, and in particular to develop renewable heating schemes.[232]

[229] *See* Danish Board of District Heating Website. District Heating History (accessed 28 February 2014). Available at http://dbdh.dk/district-heating-history/#no_02.
[230] For both municipal and customer ownership models, *see* sections 1.1.4 and 1.2 above.
[231] Köch, W (2014). *Regulation of Energy Networks in Germany.* Special research conducted for ClientEarth.
[232] *Ibid.*

6.2 Beyond Renewable Energy Production: Communities as Suppliers

While community ownership of renewable energy generation has become a popular concept, little is understood about how communities can supply consumers. However, supplying renewable electricity directly to consumers potentially offers community projects opportunities to benefit local residents through reduced prices, and to sell to consumers nationally or regionally, thereby increasing competition in supply. Furthermore, as prices of technologies such as solar continue to decrease, more citizens are interested in becoming self-suppliers, or 'prosumers'.

Communities remain largely constrained by regulatory frameworks that support market dominance by long-standing incumbents, particularly when it comes to retail supply of energy to consumers and 'auto-consumption' – production for self-consumption. Nevertheless, some Member States have made it possible for citizen-based enterprises to successfully become energy market participants. Furthermore, the role of the prosumer is becoming better recognised. While this is a relatively new and fast moving field, a number of success stories provide a starting point for further action.

6.2.1 Promoting self-sufficiency through direct supply and 'auto-consumption'

Austerity and perceived high costs of supporting renewables has caused national governments to revise support schemes downward, or get rid of them altogether. Furthermore, feed-in tariffs (FiTs) are actively being discouraged by the European Commission. It is therefore crucial that communities have an alternative way to develop community power without relying on State support.

Self-sufficiency schemes present such an alternative. Self-sufficiency can be understood as the production of renewable energy to meet an individual consumer or community's own energy needs. This can include micro-installations for houses or public buildings, such as schools. It may also encompass larger projects intended to directly supply a number of customers with limited use of public grids, or even through a private or parallel grid.

Under a self-sufficiency model, communities develop a strategy and business plan that does not envision receiving large incentives from an operational support scheme; instead, income is generated both through the direct sale of green

energy, while other benefits relate to various savings realised by the community. This may result in several types of income:

1. Income realised either through the direct sale of generated renewable energy (for suppliers), or through resulting savings of not buying that energy at retail prices (for prosumers);
2. Savings realised through not having to pay energy distribution costs (as these costs tend to make up a large share in energy bills – this means double income);
3. Income from tax savings that would be otherwise due (this depends on the country, but generally States should not account taxes from not-used (i.e. saved) energy); and/or
4. Excess production can be sold to the grid at market price.

It is possible that all of the above forms of income could be realised through self-sufficient models of community energy. However, this requires a stronger emphasis on providing investment support to community power projects, for example through favourable tax treatment, upfront grants to get projects started, and through other loan assistance. This can help to establish investor certainty.

Some projects are exploring alternative supply methods in order to remain profitable. One of these is 'direct green marketing', which is based on local and direct sale of electricity using either a private or limited use of the public grid. This model has been practiced in Germany, where many perceive that the FiTs provided under the *Erneuerbare-Energien-Gesetz* (EEG) surcharge scheme will not last. If the energy is being produced from an installation within a certain distance of local consumption (in amounts less than 2 MW per installation), customers are exempted from paying the EEG tax or grid fees.[233] In exchange for these tax breaks, the energy produced is not eligible to receive FiT payments. Until recently, more communities were using this method in order to be able to offer cheaper prices while staying profitable. Known as *Grünstromvermarktung,* or 'green power trading', community power projects can partner up with a local or regional supplier to control the process from production to marketing of green energy, by-passing the grid.[234] Energy stays off the spot market, and customers know they are getting green energy, because this type of operation is subject to balancing, and a requirement to guarantee the green origin of the electricity.

Germany

Community Power 2.0: Energiegenossenschaft Rittersdorf eG embraces self-sufficiency, Thuringia, Germany[235]

A small co-operative in rural Germany is attempting to demonstrate that there is a way to participate in the *Energiewende* without remaining dependent on FiT payments from the EEG. In 2013, Rittersdorf eG successfully constructed a 1.5 MW solar farm on a former landfill. However, the co-operative has established itself with the intent on supplying truly green energy, as opposed to simply letting it vanish into the grid where it is mixed with other dirty energy. The co-operative has partnered with Grüstromwerk, which has agreed to buy electricity produced by the co-operative for a slightly higher rate than what EEG payments would offer. Grüstromwerk then directly markets 25% of the power produced from the solar farm within 30 km of the installation. While this means that the co-operative is still mostly reliant on the EEG, based on a calculation completed by Grüstromwerk, if 1,500 customers buy energy from them the solar plant will be 100% independent from the FiT. If this can be accomplished, it will have established a regional green tariff based on self-sufficiency. While this is still a work in progress, it represents how if allowed, communities can become green through their own efforts.

Auto-consumption also fits into this model. In Germany and Denmark, where power is taxed based on consumption, auto-consumption has made sense because households have been able to save on energy bills while knowing that it is being realised through self-produced and consumed energy.

[233] Electricity Tax Act 1999, as amended 1 January 2013 (Stromsteuergesetz, StromStG), section 9(1), subpara 3. The EEG has since been revised, which no longer allows for this exemption. See Leidreiter, A (2014). "German Renewable Energy Act Reform is not a 'Feed-in Tariff 2.0'," The *Energiewende Blog* (24 April 2014). Available at http://energytransition.de/2014/04/german-renewable-reform-is-not-a-fit/.
[234] Lackmann, J (2013). "Optimierung der Wertschöpfung vor Ort: Von der regionalen Grüunstromvermarktung bis zum Modell 'Bürgerstiftung'" power point presentation for Windenergietage NRW (28-29 November 2013).
[235] Excerpts sourced from Breyer, A (2014). "German Energy Cooperative Moves to a Direct Market Model," *Solar Novus Today* (1 April 2014). Available at http://www.solarnovus.com/german-energy-cooperative-moves-to-a-direct-market-model_N7608.html.

On the one hand, these models support regional development, and are fully compatible with community power ideas and values. They provide the ability for community power projects and individuals to produce and supply themselves and their neighbours with green energy without taking advantage of subsidies. It also allows customers to become more aware of how they consume energy. On the other hand, the model used in Germany is controversial because it is perceived to undermine the EEG and support for the grid, because it receives a financial incentive without paying into the system. The German government is changing this model, and consumers will soon still be required to pay the relevant EEG tax and grid fees. The key in the future will be to incentivise direct or self-consumption while maintaining the ability to ensure those that cannot afford renewables installations can still benefit from the energy transition. If constructed in the right way this scheme could be an appropriate model for communities to strengthen self-sufficiency for themselves, as well as non-members of communities.

6.2.2 Easier licensing requirements for community suppliers of renewable energy

In the Member States covered in this report, many community power projects simply produce electricity, which is then used on site and/or exported to the grid in exchange for a financial incentive (e.g. FiT). A small number of larger community power projects, particularly in the UK, enter into 'Power Purchase Agreements' with energy suppliers (utilities), where the supplier agrees to purchase a certain amount of energy generated by the installation. In either case, members of the community then buy back that electricity for consumption from the utility. Increasingly, community power projects are expressing a desire to become fully licensed suppliers so they can get around this middleman.

Supply license requirements vary by Member State. Legislation typically provides criteria individual applicants must meet in order to receive a license, which usually relates to managerial, technical, and economic abilities. The process is

usually administrative in nature, with some costs involved. Once approved, licensed suppliers must comply with certain ongoing trading, accounting, and public service obligations (PSOs). Traditionally, monopolistic energy regimes controlled by vertically integrated companies meant that there was no room for competition. Liberalisation was intended to break down this structure, providing consumers with the ability to choose their supplier, and since 1 July 2007, all consumers in the EU have had a right to choose their supplier.[236]

This market opening has seen the entry of new actors, some citizen-based. Community power initiatives in Germany, Belgium and Spain – usually organised as co-operatives – now exist to supply 'green' energy to their customers. This has usually gone hand-in-hand with community-owned renewable energy generation. The philosophy behind engagement in these activities is that 100% of the electricity being supplied should be from renewable energy sources. In order to verify this, Ecopower, a co-operative in Belgium that also owns renewable energy generation installations, does not supply any more electricity to its customers than it produces from its own installations. In addition, municipalities are also beginning to buy back shares in local utility companies, which have a historical tradition of guaranteeing local energy supply.

Despite some success by a few small enterprises, the market remains heavily concentrated. Most Member States do not provide licensing regimes that make it easy for smaller suppliers to enter the market, and in some Member States this is virtually impossible. The IEM Directives addresses the need for Member States to facilitate cross-border access for new suppliers but without addressing overly onerous licensing requirements that may prevent smaller or community-oriented suppliers from entering the market.[237] At the national level, legal frameworks, and the independent regulatory authorities oversee them, should ensure that licensing requirements do not prohibit small and medium-sized enterprises from becoming fully licensed supply companies. At the EU level, there needs to be a more explicit requirement for Member States to adopt appropriate licensing requirements that facilitate market entry of smaller energy suppliers.

Spain

From community ownership of renewable energy generation to supply: Som Energia, Gerona, Spain

Som Energia, which is Spain's first renewable energy supply co-operative, began operating in 2011. It aims to generate 100% of the renewable energy that it sells to its customers through projects owned by the co-operative. Som Energia started by purchasing a solar installation, and it has continued to purchase projects that already have planning permission. It also intends to start developing its own projects; however, in the current regulatory climate, which is still uncertain, this option is not possible. It now has around 10,000 clients throughout Spain. It took approximately 7 - 8 months for Som Energia to obtain a license to operate in the energy market. The co-operative was required to submit a small deposit of €500, as well as a number of administrative documents to various Ministries. The process was perhaps the most time consuming and frustrating. Nevertheless, when compared with other countries the process to become a supplier was relatively easy. It is in fact more onerous to stay in the market, due to government-supervised guarantees that suppliers must provide, which benefit larger suppliers. Four co-operatives have since been established, which also aim to sell renewable energy. One of these is Goiener, which also produces some of the energy it sells.

[236] Third Electricity IEM Directive, aricle 3(7); and Third Gas IEM Directive, article 3(3).
[237] *See* Third Electricity IEM Directive, recitals 8, 35 and 57, and Article 3(4).

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London
ClientEarth
Fieldworks
274 Richmond Road
London E8 3QW
+44 (0)20 7749 5970

Brussels
ClientEarth
4eme Etage
36 Avenue de Tervueren
1040 Bruxelles
Belgium
+32 (0)2 808 3465

Warsaw
ClientEarth
Aleje Ujazdowskie 39/4
00-540 Warszawa
Polska
+48 (0)22 307 0190

www.clientearth.org

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